

THE CULTIVATOR

THIRD

TO IMPROVE THE SOIL AND THE MIND.

[SERIES.]

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ORDER AND SYSTEM.

A well conducted Farm is a beautiful machine. We have seen a steam-engine of fifty horse power, that ran with such perfection that it could not be heard at a distance of twenty feet. We have heard some, much smaller, that gave out a mixed jargon of thumps, rattling of iron, and rushing of steam. At a celebrated trial of agricultural machines, there were two mowers—one could be heard nearly a mile;—the other scarcely more than a few rods, and the cutters went through the grass like a hot knife through butter. There were likewise two threshers—one was huge and ponderous, and when in motion trembled throughout, with a noise somewhat like thunder. The other, a two-horse tread machine, ran so perfectly that nothing could be heard at ten paces, but the tread of the horses' feet on the rolling platform, and the whistle of the grain and straw as they were shot from the cylinder.

It is precisely so with the machinery of a farm. If well conducted, every part will move on noiselessly but efficiently—all will be promptly done in its season, there will be no confusion, and a great deal will be accomplished. A badly managed farm, on the contrary, if not wholly neglected, will be hurry and disorder, with every thing out of joint, and very little will be done. The farm is a *complex* machine; and like all other machines made up of many parts, must be perfect at all times, or one small part will suspend the motion of all the rest. A broken cog, a missing bolt, or a bent axle, will derange the whole.

To come somewhat to particulars: The farmer must know at the start what he is going to do. His yearly operations must be distinctly before him. It will not be profitable for him to stop, and consider, and plan, after a piece of work is partly executed. He must begin at the beginning—must have his fields well laid out—his rotation digested—and the extent of each crop prescribed. If he is a practical farmer, he will of course know how much time will be required for the preparation of the land, sowing, cultivating, and harvesting each crop,—to which esti-

mates he should add at least two-fifths for the interruptions of rainy weather and other contingencies. This will prevent him from undertaking too much, which is, next to laziness, the most fruitful cause of all bad farming; of hurried operations, and undestroyed weeds.

There are two great requisites in all successful husbandry,—to make the best use of all spare moments; and to be always ready in advance for every emergency. These two essentials work together, for by properly using the spare moment, ample preparation may be made. Slipshod farmers are too much like the man with a leaky roof; in fine weather no repair was needed, and in rainy he could not do it. It may perhaps be laid down as a universal truth, that success in all enterprises depends on being able to predict beforehand what will be wanted. The need of a single tool in haying time, may result in arresting the labor of ten men, and in the loss of ten tons of hay by an approaching storm. The want of good implements of tillage may delay the sowing of a crop, till rains may postpone the operation a fortnight. "For want of a nail the shoe was lost, for want of a shoe the horse was lost."

A workshop with tools is indispensable for every farm. The owner should supply himself with a complete list of all implements. A place should be provided for every one, and every one should be in its place; and on every rainy or stormy day, an examination should be made and repairs promptly performed. Tools should be kept constantly in order, as a standing rule, and not be left broken till wanted for use. This is still more important, if they are to be sent to the village mechanic; for if taken in time the errand may cost much less than to wait till the moment required for actual use, and then to take a horse from a plow or from a hay wagon, to send three miles for a trifling but necessary repair.

In order to be able to accomplish farm labor promptly and in season, teams must be healthy and in the best working order. To be healthy, they should be fed with great regularity and uniformity, whether working or not, with good wholesome food and not with musty hay and grain or short pasturage. Their apartments must be clean and pure, and they themselves well curried. Some farmers lose much by giving their horses more work than they can perform comfortably—they are consequently worked too hard, enfeebled and made poor, and prematurely worn out. Not being supplied with sufficient animal force, favorable chances are lost and work allowed to accumulate, and increased labor will be required for its performance, and a waste result from delay. An extra working animal partly pays its way in manure, and sometimes its whole yearly keeping is returned in increased crops from early seeding and prompt cultivation.

Jno L T

Every farmer should carry a memorandum book. It is his compass and log-book combined. A page for each week, by way of assisting the memory, laying out every thing clearly before the eye, and for recording the numerous suggestions for future experiments, which must constantly occur in practice, would prove invaluable another year, and in ten years would develop an inexhaustible fund of facts.

CARE OF SHEEP IN SUMMER.

It is not "good management," to say the least of it, to leave sheep to take care of themselves through the summer—merely giving the attention of washing and shearing. They need constant looking after—the eye and care at least of the owners, to see that they suffer no neglect during the grazing season. To make sheep husbandry profitable, the animals should always be thrifty and improving, and it requires no great expense, save in *attention*, to secure this important end.

"Sheep well wintered are half summered," is an old and very correct adage, for if the flock comes in good condition to a fair bit of grass from their winter yards, they will retain that state very easily. Ewes with lambs should have a better pasture than store sheep require, as the flow of milk and growth of the sheep, as well as the flesh of the dams, depend upon their being supplied with an abundant supply of nutritive herbage. If on red clover pasture, it should be in full supply, that it may not be eaten too closely; and the same is true of timothy. Blue grass, white clover, and the like, will bear shorter grazing without injury.

When shearing, the farmer should select out all the sheep he intends to dispose of during the year—the old ewes first, as well as all that are in any way defective in wool, form, or constitution. In this way a flock of ewes can be kept right, and looking right. We would never suffer a sheep to get old on the farm, unless it were a very choice breeding animal. These sheep should be given good pasturage, so that they may attain good marketable condition, and then find ready and profitable sale. We said, let the farmer select these at shearing time. No good sheep-keeper allows purchasers to pick from his flock—and at shearing he can judge most correctly of the age, character and value of his sheep, and mark or sort out at that time. At any rate, whenever he sells, let him make his own selection, and be sure and "weed out" his flock.

In selling wethers, various circumstances are to be taken into consideration. An old sheep farmer once gave us some rules on this subject, rules by which his practice was guided. If pasture was scarce, he would sell immediately after shearing. If pasture was plenty, and winter feed scarce, he would sell in the fall. Pasture and feed both abundant, he fattened for drovers or butchers in the early spring months, never keeping a wether over five years old, and seldom selling them under two years age. When good prices for lambs prevail, we may profitably sell wether lambs in the fall, especially if all our older sheep are of good character, and we desire only a small advance in number, such as the best ewe lambs will supply. But as a general rule, we should seek to "keep our flocks always composed of young, healthy and thrifty sheep. Better that old and inferior ones should be sold at half their value, than good, young, thrifty ones at a fair price."

Wheat harvest is now in progress, and it may be well to remark that sheep cannot safely be allowed to glean

wheat-stubble, when there is danger of their getting much of this inflammatory grain. On oat or barley stubble they may fallow without danger, unless it be to the young clover, to which these and wheat fields are, or should be, generally seeded. Upland pastures are the best for sheep, though on lowlands, when dry, they may run without injury to themselves, and very generally to the improvement of the character of the herbage.

Lambs should be weaned at from sixteen to eighteen weeks old, and when separated, the ewes should be given short pasturage for a week or ten days, the better to dry off their milk. The lambs should have fair grazing—something new, like young clover, and if a few tame sheep are put with them they will be far less wild, and will learn to eat salt, and to follow the shepherd very readily. Lambs should not be placed where they will be frequently disturbed, save by the presence of some one to whom they are to become accustomed; quiet is best for sheep if we would have them orderly and always thriving.

We have said nothing of salting or watering sheep. The first we regard as occasionally beneficial—say once in ten days at first, and less frequently afterward. The last does not seem particularly necessary while heavy dews fall, and the pastures remain succulent. Our sheep seldom come to the spring for water at this season, though they could easily do so. A change of pasture occasionally is beneficial, and we would divide the time between sheep and cows, where we could conveniently do so, both for the benefit of the pasture and the animals themselves.

To conclude, we repeat that it is important to give sheep that care in summer, which will fully prepare them to endure, without loss, the rigors and deprivations of the winter season. This is the only profitable method of sheep husbandry, and it should be the golden rule of management, "Keep the flock always in thriving condition."

LIME AND WHEAT.

GEORGE H. CHASE, an enterprising young farmer of Union Springs, N. Y., has tried an experiment the present season with salt, ashes, and lime, on wheat. An acre each was selected for the three experiments. About two barrels of salt were applied to one, two two-horse loads of ashes to a second, and a hundred bushels of lime to the third acre. The result has not been measured as yet, but the effects of each are very visible. The salt proved least useful; the ashes more so; and the lime most so of all. The line of superiority marking the boundaries of the limed portion was as distinct as a line fence. The increase of the crop by liming, over the portions not dressed with anything, is at least ten bushels per acre.

The question occurs whether a smaller quantity of lime would not have produced an equal result. This will receive the test of another trial. The land is a strong or clayey loam; and what is worthy of notice, is in the midst of a limestone region, where the country is underlaid by the rocks of the corniferous limestone, which is abundantly scattered over the surface. But acids do not show carbonate of lime in the surface soil.

Ready-made Yeast.

In a late number we gave directions for making yeast. A successful housekeeper who has just read it, informs us that she has adopted that mode for many years, but that she finds the addition of the potatoes of no benefit and no injury, and for years has used only Indian meal, which is simpler and easier to make. In using the yeast for making bread, she omits the soda, believing the bread better and more wholesome without; and those who have eaten bread of her manufacture, would have to travel a long road before they would find better.

THE FARM AND THE WORKSHOP.

Our correspondent, Mr. S. E. Todd of Tompkins county, has prepared a volume, announced several weeks ago in the COUNTRY GENTLEMAN, under the title of "The Young Farmers' Manual." The "Farm and the Workshop," which is added on the back of the book as a subtitle, expresses its character much more nearly. Every good farmer should possess an acquaintance with the use of many tools, the employment of which he has never learned as a trade, and the "various operations of the farm" which the Preface of the present volume announces it to be the author's purpose "to instruct the young farmer how to perform," are mainly those of the workshop, together with such outside matters as locating the farm-buildings, and putting up fences of various kinds. Brief chapters are also given upon Draining and Plowing.

It is not the object of the present notice to review critically "The Young Farmer's Manual," but to give to our readers who have not as yet purchased it, a general idea of its contents—in the progress of which endeavor, it cannot fail to be apparent that the book must include a considerable store of useful information. It may not be improper to remark in the beginning, that Mr. Todd has acquired this information—almost exclusively, unless we are mistaken—from his own experience. He has gone very fully into detail with regard to many particulars on which this experience has shed light in the saving of labor and expense, and while this will be a recommendation to the class for whom the book is primarily intended, namely, for *beginners*,—some may be found to wish that its design had admitted of a little greater condensation, particularly upon one or two subjects that quite overshadow all the rest in the length at which they are treated. For instance, on the title page we are promised "full directions for performing nearly every branch of farming operations," while the following table will show the divisions of the work itself, after we pass the 25 pages composing a general introduction:

Chapter I—The Buildings of a Farm,	30 pages.
II—Fencing,	172 pages.
III—Tools for Fencing,	57 do.
IV—Fence Laws,	2 do.
Total pages about Fencing,	231 do.
V—Underdraining,	34 do.
VI—Plows and Plowing,	24 do.
VII—Harrows and Harrowing,	6 do.
VIII—Sowing Grain, &c.,	14 do.
IX—The Farmer's Workshop,	82 do.

In other words, more than half the book is made up of the chapters on Fencing and Fence Tools, first published in the Transactions for 1858 of our State Ag. Society, but now to some extent re-written or re-arranged. A second volume is to follow, as we learn from the introduction of the present one,—in which we are referred (pp. 15, 16,) to it for "Fitting up Machinery," "the Principles of Draught," &c., and also, as we are glad to find in another place, for a chapter on "how to make a good farm better." For, in a farmer's "manual"—however important more attention to better machinery may be and is—it should not be overlooked, that, after all, a tolerably fair proportion of what the young farmer must learn in order to become a good one, is disconnected very widely from the mere keeping of his fences in good order, or the ability to "plane a board true and smooth." The more, in fine, that Mr. Todd can tell us of his own PRACTICE, the higher the rank we shall award his work as a Manual for other farmers.

AMBER VARNISH.—Will some of your subscribers give a recipe for amber varnish through THE CULTIVATOR.

B. F. SEVERANCE.

[For the Country Gentleman and Cultivator.]

FRUIT-GROWING IN NEW-JERSEY.

Much attention is now given to the cultivation of small fruits, which are far more profitable in this vicinity than common farm crops, and many persons having but a few acres of land devoted to choice fruits, clear more money than others who cultivate large farms in the ordinary way.

Strawberries have yielded abundantly, and brought remunerative prices. Wilson's Albany produced with the writer over two hundred bushels per acre, and averaged four dollars per bushel. One gentleman in this neighborhood gathered one hundred bushels of strawberries daily through the height of the season. The most favorable results have followed the use of the subsoil or mole plow, by which the beds and alleys are thoroughly loosened to the depth of 15 to 17 inches. The plan is, soon after the fruit is gathered, to take a strong team and pass the plow several times through the beds, going below the plants, which lifting the earth a little makes it so mellow as to admit air and moisture, and gives to the plants new life and vigor; there being a greater depth of soil prepared for the roots to penetrate, they will better resist the action of frost in winter, and the drouth in summer.

Raspberries have yielded better this season than usual; the high price at which they have been selling, has induced cultivators to introduce new varieties and give better treatment. The earliest varieties commenced ripening here about the 20th of June, and have yielded with me forty bushels per acre, and brought eight dollars per bushel.

The Allen raspberry is being extensively grown, and when properly treated yields large crops of perfect berries, and the most delightful flavor. Some persons having depended on it alone for a crop of fruit, have failed, as the blossoms are deficient in pollen, and unless impregnated by some other variety, will not develop its fruit any more than a plantation of Hovey Seedling strawberries. Allen's Red Prolific, however, which is an upright grower with red canes, bears abundantly by itself of most beautiful berries, which have brought 31 cents per quart and upwards during the whole season, and is amply sufficient to impregnate the Allen Antwerp, and should be mixed with them in planting. Thus treated, the Allen has continued to yield a full crop of fruit with me to the close of the season, and has suffered less by exposure to the sun and dry weather than other varieties. The luxuriant growth of young suckers thrown up around each hill, protect the fruit and bearing canes from the direct rays of the sun, which upon other varieties not producing suckers sufficient for shade and protection, have withered up prematurely. The proper plan for field culture is in hills, and by farming each way with the plow and cultivator, superfluous plants can be destroyed as easily as grass and weeds, and are not so objectionable as has been stated for a family garden.

As the raspberry season is about closing, blackberries are commencing. The Dorchester is now at its height, having been ripening for ten days past, is yielding a full crop, and will be mostly over by the time the New Rochelle is fairly under way; price thus far has been 25 to 31 cents per quart. My whole crop last year averaged 21 cents per quart, although the market at the same time was overstocked with the common wild blackberry. Several farmers in this vicinity have from 12 to 25 acres each in cultivation for market.

Currants and gooseberries have done well. One gentleman having 12 acres in gooseberries, informed me that they yielded him 100 bushels per acre, and he was then receiving \$2.25 per bushel, and paid 25 cents per bushel for picking them.

We are now preparing to sow buckwheat and rye together on new stump land; for two years past I have adopted this plan, and had excellent crops of both buckwheat and rye from the once plowing. Both crops being well adapted to destroying the wild nature of the ground, leave it in fine condition for succeeding crops with but little labor. WILLIAM PARRY. Cinnaminson, N. J.

Editorial Notes Abroad.

No. XXXIV---Across the Irish Channel.

Into Sleaford, then, I came on the Monday morning of the week in which the Irish Show was to take place at Dundalk, and consequently with too little time at command to learn as much as I should have liked of the good farming of the Messrs. LOWE and their neighbors, whose farms I visited upon Lincoln Heath. But there were two peculiarly English features of the visit, which are worthy of a moment's attention.

Market Day and Rent Day.

In the first place it was the Market day at Sleaford. My friends, like many others of the farmers of the vicinity, were in attendance with little bags in their pockets containing samples,—as, greatly to the convenience of both parties concerned, the buying and selling is all transacted by sample, as was remarked in the course of my Norfolk notes. These markets are constantly increasing, I understood, in number and importance throughout England; and there can be little doubt but they would be found essentially of service to the interests of farmers in this country. We might not require them, at first, so frequent in their recurrence, or so numerous in a given area, because there are seasons of the year when our roads are not so passable as theirs, and because, moreover, the demands of purchasers here would scarcely warrant it.

In the second place, Tuesday (July 26) was the Rent day—an occasion of considerable importance, you may be sure, to an English farmer—and the Agent of the proprietor was in waiting during the morning to square the accounts of the year with the tenants. In the evening, in the absence of the landlord, the same gentleman presided in his stead at a dinner to those who had previously been contributing so much to render his exchequer a heavier and their own a lighter one. Although by agreement, I think, the rent is due quarterly, unless I am mistaken, it was the usual custom here to make the four settlements at once, at the same time each year. The which having been completed in a satisfactory way, one naturally feels that the burden of a twelve month is ended, and enters upon that of the coming year the more cheerily for a re-union in which kind wishes and good healths may be mutually interchanged. I suppose that the *class* spirit, if it may so be termed, is getting to be nearly as strong among English farmers, as a body, as it is among the manufacturers and commercial men of the country; it is at least much stronger than here—the farmers are consequently a more united and influential body, understand their interests better, and feel a correspondingly greater sympathy with each other, and jealousy of any interference with their affairs by any other class in the community.

By the kindness of Mr. LOWE, I was present at this dinner, which, succeeded by tea and subsequently by pipes, kept many of the company together until after midnight. It afforded me a fresh opportunity of discussing agricultural matters with the intelligent and energetic tenant-farmers of that part of the county, and illustrated throughout quite forcibly the prevalence of the feeling alluded to above.

Culture of the Mangold Wurtzel.

It was to my friend, Judge FRENCH of New-Hampshire, that I was indebted for a note to Mr. L., and many were the references made to his visit there two years previously—and, among other circumstances, to his interest in the

Mangold crop, and to the directions Mr. L. had furnished him for its culture. These directions I copy below:

"Take dry land, well drained,—not clay—that will work fine, say after wheat. Manure with twelve tons of good manure to the acre, at least, and the more the better. Plow it in six inches and leave it till spring; then when dry enough, harrow deep, roll and work fine with plow and harrow. Sow broadcast at least 560 pounds of salt; twice the quantity is better. Throw into ridges, twenty-seven inches apart with a common plow. Soak the seed eighteen hours in water, and lay on a dry cloth twenty-four hours. Drill with a hand-drill, three to six pounds of seed to the acre. Examine and see if the seed is sound or has been eaten by an insect. Drill 100 pounds of superphosphate with ashes, the more the better, with the seed on the ridge, the ridge having been first rolled lightly to flatten it. Sow one inch deep, dropping the seed six inches apart. Hoe as soon as up—thin out to one foot apart. Horse hoe and keep clean. Look over and be sure to have but one plant in a place.

"In October or November gather without breaking the skin, cut or twist off the top an inch above the root, remove the earth with a dull instrument, so as not to cut the root. They are usually stacked and covered with straw and earth in England, but will probably, (says Mr. Lowe) keep like potatoes anywhere. Average crop 26 to 30 tons of 2240 pounds to the acre. Spread the leaves evenly over the ground and plow in. By no means remove them from the land. Do not feed out till February, because the mangold is poisonous early in the season, and will scour the cattle and do them no good."

Agricultural Education in Ireland.

How I was obliged to hurry away, the journey to Dundalk, and the story of the exhibition that there took place, were all recorded in my letters at the time, with brief reference to a visit at the Agricultural School at Glasnevin, the notes of which last, accompanied by a sketch of what is now going on to advance the cause of Agricultural Education in Ireland, even at this late date, will be new to many readers here. The official report of the Commissioners of National Education for the previous year, (1858) has been published since my return home, and was at once kindly forwarded to me by Dr. KIRKPATRICK, Inspector of the National Agricultural Schools, with some other interesting papers, from which, and the information gathered at the time of my visit, I draw the following facts.

Although the subject had been previously discussed and partial action taken, it is to "the deplorable effects of the famine of 1846-7 on the agricultural community of Ireland," that the present extended plan of operations is ascribed, having, as its object, "to bring agricultural knowledge within the reach of the great mass of the small tenant farmers and laboring poor." The system has since been developed by degrees until, December 31, 1858, it included, beside the Albert National Agricultural Training Institution at Glasnevin, with 71 pupils, schools partially or entirely under governmental control as follows, if my summary is correct of the statistics given in the report, of which there does not appear to be any aggregate table appended:

Twenty schools under exclusive management of the Commissioners, with.....	666 pupils.
Twenty-one Model Ag. Schools under Local management, with.....	857 do.
Forty-seven ordinary Ag. Schools, with.....	1,840 do.
Sixty-seven Workhouse Ag. Schools, with.....	2,693 do.
Add for Glasnevin,	71 do.
Total, 156 schools, with	6,127 pupils.

The Albert Institution.

The Training Institution at Glasnevin was established in 1838, with a farm of 50 acres, extended somewhat in 1849 and in 1850 to 180 acres, its present size. Its pupils are "boarded, lodged and educated at the public expense," with few exceptions—there being for example, but three paying pupils in 1858. The requisites for admission are the age of 17 years, certificates as to good character and health, and the ability to pass an examination in the simpler branches of study, such as reading, writing, grammar, geography and arithmetic, together with some knowledge of book-keeping and geometry. The extent of the course is two years. Dr. Kirkpatrick the Superintendent, has entire supervision, both of the educational and agricultural departments—assisted by two literary teachers and an agriculturist, Mr. BOYLE, who is the practical farm manager. There is also a gardener employed. Dr. HODGES of the Queen's College at Belfast, lectures on Animal Physiology, the Diseases of Domestic Animals, &c., Mr. Moore, the curator of the Royal Botanic Gardens, on Botany and Vegetable Physiology, Prof. Sullivan on Chemistry and Geology in their relation to agriculture, Mr. Baldwin on Agriculture, and Mr. Campbell on Horticulture—each lecturer giving a course in each of the two sessions into which the school year is divided. The branches of study, aside from those embraced in the above lectures, are English grammar and composition, arithmetic, book-keeping and mathematics, including land surveying, levelling and mapping. The instruction in agriculture "embraces all those branches which constitute the science of farming, as well as a detailed account of the enlightened and improved practices of the day; and in order that the pupils may become thoroughly acquainted with improved practical husbandry, they are called upon to take part in the performance of every farm operation, and the feeding and management of live stock. They have an opportunity, too, of practically studying the application of steam power to agricultural purposes, as well as the use of a large assortment of those modern implements and machines, which are found economical substitutes for manual labor." All the labor of the farm is performed by the pupils, to whom its appearance is certainly most creditable.

The land in connection with the institution comprises two farms. One of them, called the large farm, containing a little more than 145 acres, is divided into four sections, of which one is largely composed of pasture land and is farmed on a system of its own, while upon the other three, three different rotations are employed for the purpose of illustrating the different methods most commonly approved, as follows: Twenty-one acres under a three course rotation of

1. Green crops, manured.
2. Grain, with Italian rye grass, and clover.
3. Grass, for soiling and for hay.

Thirty-six acres under the ordinary Norfolk four course shift, of

1. Green crops, manured.
2. Grain, with grass seeds, generally Italian rye grass.
3. Grass, for house-feeding cattle, and hay.
4. Oats.

Lastly, twenty-five acres under a five-course system, only differing from that last given, in keeping the land under grass two years instead of one. The balance sheet on this farm for the year ending 31st March, 1858, showed a balance of about a thousand dollars (say, £217 3s. 1d.) in favor of the pupils' labor.

The other, or small farm, of about 23 acres, was established in 1856, for the purpose of affording an illustration

of small farm management, and to present to the sons of small farmers an example which they might imitate. The following five-course rotation is here carried out:

1. Turnips, Mangel-Wurtzel, and Carrots.
2. Potatoes, Winter Beans, and Cabbages.
3. Italian rye grass,
4. Do.
5. Oats.

The Italian rye-grass is sown in autumn, immediately after the harvesting of the potatoes and beans, and a most luxuriant crop is thus obtained. In the season of 1858 they had grass three feet long, and yielding ten tons per statute acre on this farm early in May.

Thus every opportunity is given the pupil here to acquaint himself as thoroughly as possible with the practical superintendence of farm operations on different systems and degrees of extent. The Albert Institution, remarks Dr. K., in his Report for 1856, is "the life and center of the entire system of agricultural education, and it is the great prize to which intelligent aspirants in the National Schools look." It appears, in fine, to be the intention of its managers to take up the agricultural education of the pupil where the other schools leave it, and by two years farther and more careful training, qualify him to go to farming for himself, to seek a place as farm manager for others, or to act as teacher in any of the other schools. The report for 1858 states that of the 48 young men who completed their course the previous year, there were then 21 farming at home for themselves or parents, 7 occupying positions as land stewards, 4 as agricultural teachers, and 2 as literary teachers.

There are \$500 awarded annually among the Students at Glasnevin in prizes—\$50 in each of the following branches, Chemistry, Botany, Animal Physiology &c., Horticulture, and Literary subjects, and the remaining \$250 in various strictly agricultural prizes. These prizes are determined by oral and written examinations upon the lectures and studies of each session—in the latter (the written examinations) a scheme of questions being submitted, to which the pupil writes out the answers to the best of his knowledge and ability, in a given time—I suppose of course, without the opportunity to consult any authorities, but compelled to rely upon the knowledge acquired by him during the studies of the term. As an example of these examinations in one branch of study—Practical Agriculture—I am able to give the following series of questions, which I copy here for the purpose of showing what kind of practical "training" it is that the pupils are expected to receive:

PRACTICAL AGRICULTURE—EXAMINER, MR. BALDWIN.

"1. Give the order of succession of the crops in the three, four and five course rotation, and state the circumstances to which each of these courses is best adapted.

"2. Supposing a farm of 20 statute acres of good land, under the three crop course, how many head of cattle could be maintained on it throughout the year? Give the particulars.

"3. Give the dates of sowing the several cultivated crops, and the soils best suited to each.

"4. Assuming the value of horse labor at 2s. 6d. a day, men's wages 1s. 3d., and women's wages 10d., and farmyard manure 4s. a ton—estimate the cost of an acre of turnips. It will be necessary to give the number of 'hands' required for each operation.

"5. Name the four varieties of each of the following crops most in favor among intelligent agriculturists—mangel, turnips, wheat, and oats.

"6. State the merits of Italian rye grass as compared with other forage plants.

"7. What are the relative merits of mangel wurzel and Swedish turnips?

"8. State your views on the theory of the rotation of crops. The answer must embrace the two following, among other points:—1st. How far a farmer should bind himself to any prescribed course. 2d. How prevent the land from becoming 'clover sick,' 'turnip sick,' &c.

"9. Give the periods of gestation of the domestic animals, and the best time for serving dams.

"10. What is the most economical way of fattening cattle; and what the probable profit on an ox so fed, which weighs 6½ cwt. when put up to fatten? It will be necessary to give the quantities of the several kinds of feeding, &c."

The questions submitted upon the other subjects of study cover similarly extensive ground, and require equal

ly thorough acquaintance with their details—not a knowledge “by rote,” but one that may be made serviceable as occasion may require. “Our primary object,” writes Dr. K., “as a teaching body, is to make known the laws which Science has established, and inculcate those practices which experience has sanctioned.”

At the same time it is thought both expedient and beneficial to conduct occasional farm experiments, in which, as may be readily imagined, intelligent pupils would at once take a deep interest, while in the course of their development there must be many opportunities of impressing useful lessons upon the memory. The report for 1858 contains accounts of experiments carried on during that season, with regard to the relative value of different manures in raising Swedish turnips, and as top-dressings to grass lands—also with respect to the comparative merits of different varieties of Mangolds, of which the “new yellow oval” was found to yield considerably better than any other.

— But this subject is growing upon my hands so that I shall have to defer its conclusion until another opportunity.

No. 23.—THE STRIPED FLEA-BEETLE.

J. W. L. of Solville, Madison Co., N. Y., incloses to me in a letter dated June 19th, some insects which he says are “committing great depredations upon the bean crop in this vicinity. They eat mostly under ground. After the beans are well sprouted, and within half an inch of the surface of the ground, they bore minute holes on the inner side of each half of the bean, and it is, of course, stunted, and soon turns black. They sometimes attack the stalk below the bean, also, and follow it down an inch or more, though this is not common. These insects are very lively, and it is difficult to catch one of them. They do not seem to fly, but hop. Two or three of the specimens are larger, and may be a different insect; yet they are found together, all engaged in the same occupation, that of destroying the beans.”

I find three different insects in this inclosure, which, being taken associated together, merit a notice, as the real culprit will hereby be more clearly pointed out to any one who searches for it.

The two largest specimens are young soft field crickets, recently hatched from the eggs—black, with a whitish band across the middle of their backs. Whether these feed on vegetation or on other insects is not fully ascertained.

Next in size is a specimen of a small black beetle with two pale yellowish spots on each of its wing covers, and hence named the Four-spotted Bembidium (*B. 4-maculatum*.) This is very common in our gardens. It never hops, but sparkling like a diamond in the bright sunshine, it runs briskly in a very serpentine or zigzag track, a few inches, till it gains some crack in the ground, or other covert, in which it abruptly disappears. It feeds on other insects, its strength and agility enabling it to overpower those that are much larger than it in size.

Finally, there are three specimens of the striped flea-beetle, the *Haltica (Phyllotreta) striolata* of Illiger. This is also an insect which is quite common in our gardens and often does much injury. Its favorite food, evidently, is the leaves of the mustard. About the middle of June many of the leaves of this plant may be seen perfectly riddled with small holes by this insect. A hungry beetle gnaws a hole sometimes the eighth of an inch in diameter but most of the perforations are smaller, scarcely large enough to admit a pin, and each of them is edged by a white ring, which again is inclosed in a blackish circle.

But in addition to the mustard, all plants of the Natural Order *cruciferae*, are fed upon by this beetle, and it thus happens that the young tender leaves of radishes, cabbages and turnips are attacked and often seriously injured or even

destroyed by it. And these leaves being not thin like those of the mustard, but thick and succulent, it is usual for the insect here to merely nibble little holes into, without reaching through them, some of the holes being sunk in the upper, others in the under surface of the leaves. Nor do these leaves become discolored at the wounded points, as in the mustard, but retain their green hue. Perforations occur, it is true, reaching through these leaves, but these appear to be made seldom by this, but mostly by other insects.

Though the injury sustained from this striped flea-beetle is usually slight and but little regarded, it is sometimes quite formidable and vexatious to the gardener. Around Albany I am told that, some years, whole beds of cabbage plants, if not watched and attended to, are destroyed by these flea-beetles, sometimes in the short space of twenty-four hours. In the winter of 1857, Hon. E. A. Lawrence informed me that, what I recognized to be this insect, had been very destructive to the cabbage crop in all the gardens around New-York the previous summer. In his own grounds at Flushing, he had planted six acres to cabbages, but to such an extent were they wounded and killed by this insect that he finally cultivated but one acre, and to accomplish this he was obliged to set the ground over repeatedly with new plants, as those previously set disappeared. And this insect was the principal cause of the scarcity and high price of this vegetable in the city markets that winter, it being nearly double its ordinary price.

Accustomed as we are to seeing this beetle openly exposed upon leaves in the clear sunshine, and feeding upon plants which possess an acrid, pungent taste, we should not expect it would penetrate under the ground to get at the mild and almost tasteless seed-leaves and root of the bean. But Mr. L.'s account of its gnawing minute holes upon the soft inner sides of those seed-leaves, is so like the work of this insect, that, in connection with the specimens he sends, it appears to render the fact sufficiently authentic. The bean before it sprouts from the ground must, therefore, be added to the plants to which this insect has heretofore been known to be destructive.

This striped flea-beetle is a very small, shining, black insect, scarcely the tenth of an inch in length, with a pale yellow stripe on each of its wing covers, which stripe is not straight but is slightly bent or wavy. Notwithstanding the smallness of this insect, the whitish stripe upon each side of its back may be distinctly seen by the eye, in the clear light of day, and this mark, in connection with this insect's leaping with the briskness of a flea, will suffice to distinguish it from all the other insects which are liable to be met with in the situations where it occurs.

In some specimens, however, the stripe alluded to is partly obliterated, its two ends only being present, thus forming four spots upon the back, and then the insect has a considerable resemblance to the four-spotted Bembidium above mentioned. This four-spotted variety was discovered and scientifically described anterior to the normally marked insect, by Fabricius, in the year 1801, who gave it the name of *Crioceris bipustulata*. But as this is only the name of a variety, it is not entitled to stand as the designation of the species. On a subsequent page of same volume, Fabricius described the species more correctly, naming it *Crioceris vittata*, but he had already given this name, *vittata*, to another species of *Crioceris*, hence it could not be employed to designate this species also. In 1806 it received the name *striolata*, from Illiger, not Fabricius as Dr. Harris incorrectly says, and by this name it has been usually designated since. In the catalogue of Coleopterous Insects published by the Smithsonian Institution, two very distinct insects are confounded together under this name, the *elongata* of Fabricius and Olivier, which is also the *taniata* of Say, being a southern species quite different from the *striolata*, and unknown to our entomologists at the present day, though specimens of it have been sent me by both my valued correspondent, Wm. S. Robertson, from west of Arkansas, and my daughter, from Mississippi.

I have only to add, that dusting the plants infested by these flea-beetles, especially when the dew is on, with

lime, ashes, plaster, Scotch snuff, or soot, or with two or three of these mixed together, is the remedy popularly resorted to for repelling them. I have not tested these articles with sufficient attention to form an opinion respecting their efficacy. The insect is very shy and timorous, and whenever I see it on radish or cabbage leaves, I am accustomed by striking the hand towards it, and by brushing and shaking the plants, to scare it away; and I entertain the opinion they will mostly forsake spots where they are frequently menaced and disturbed in this manner, and resort to situations where they find they can remain unmolested.

ASA FITCH.

CULTURE OF GRAPES IN POTS.

EDS. CULT. AND CO. GENT.—I would like to ascertain through the medium of *THE CULTIVATOR*, the best practical method of raising grapes in pots. By a description of the system, at your convenience, you will oblige one at least of your many subscribers. N. H. PERRY. Conn.

The culture of grapes in pots requires more skill and attention than by other modes, at the same time that it possesses some peculiar advantages. One of these advantages is the small space they occupy, nearly double the amount of fruit being obtained from a house occupied by vines in pots, as by the ordinary method. Another is the facility with which the plants may be transferred from one place to another, as growth, warmth, &c., may require, and thus they need not occupy space in the house when not growing. A third is the small amount of prepared soil needed for filling the pots, as compared with that required to make or fill a large border.

The skill required is more especially needed in watering. The earth in which they grow being in small quantity, requires great care to be kept exactly at the right degree of moisture. The quantity applied must also vary with the size of the vine and the rapidity of growth.

Eyes are usually employed in propagating the vines, one being placed in each pot. If they grow vigorously they may be made to bear fruit the second year, but more usually the two first years are consumed in preparing the vine, and the third gives the crop. Some cultivators change the pots often, as the plant advances, but where fruiting is an object the second year this frequent transfer would check growth too much, and three changes throughout are enough. As there will be a large amount of prepared earth in a large pot, unoccupied by roots, when a small vine is first placed within it, the watering should be given only at the center, that the soil may not be needlessly soaked and soured before the roots reach it and pump up and carry off the water.

The compost for filling the pots may be an equal portion of leaf mold, sand and turf, for starting the eyes and for the early part of their growth. It should not be very fine, but somewhat porous. If, however, the soil from which the turf is taken is light or sandy, the leaf mould and turf only will be required. Subsequently, where they are removed to a larger pot, a compost of the same materials with an addition of one-third rotted stable manure, and one twentieth leached ashes should be used. To produce a rapid growth, liquid manure should be employed for watering—it may be the drainings of the manure heap, a mixture of fine manure with water and a little ashes, with the clear liquor afterwards drawn off; or guano water, made of one pound of guano to ten gallons of water. Care must be taken to water quite moderately at first; but as the plants advance rapidly in growth, and fill the pots with roots, it must be given copiously. It should be remembered as a guide that a plant with three leaves will need

but a tenth part of the water required for one with thirty leaves; and also besides this that a fast growing vine will consume water in proportion to its increase. When the wood turns brown the watering should be diminished, and when the fruit begins to color it must be still more sparingly administered, if a fine flavor is desired. The water should be of the same temperature as the air in which the grapes grow.

The time for starting the eyes may be in the latter part of winter, or very early in spring. The strongest, plumpest, and best ripened buds must be selected; the mode of propagating will be found in most books or fruits, and is shown in figure 1. If desired to fruit the second year, a good bottom heat will be necessary during the early part of the season to hasten growth; and a frequent and judicious pinching back will be required to prevent the strongest buds from forming only on the upper part of the vine. A similar result is obtained



by training the vine downwards. If the fruiting is commenced the second year, cut back the vines about three feet high; if the third year, they should be cut nearly down, and new canes trained for the succeeding year. Even when every care is taken to have bearing vines the second year, a portion will be too weak, and will require cutting back for a third year's bearing. Five to eight bunches will be enough for one vine. If heavily fruited, the vines will bear but one crop and become exhausted. If they sparingly bear, they may be removed afterwards to a new pot, pruning the roots and spreading them out, and after one year's growth of a new cane, bear a second year again. Good cultivators, however, generally prefer raising new plants from eyes, finding it less trouble than to recover an old vine, and giving better fruit.

Where early forcing is adopted, it is important to suspend the growth as early as possible the previous autumn, so as to give a period of repose. This is accomplished by watering sparingly, placing the pots on the north side of a building, and, if necessary, by turning them on their sides to allow the water to drain off.



Support for grapes in pots.

The after treatment of the vines during the bearing season, is quite similar to that in common grape houses—the shoots being stopped when the branches form, and again when the grapes swell. The best and most evenly distributed bunches must be selected, the rest removed—it is much better to have too few than too many—five or six bunches to a vine will usually be quite enough. The accompanying cut (fig. 2,) will show the mode of constructing the supports, consisting of four wooden rods, supporting horizontal wires.

Pots or tubs twice the size of a common 12 quart water-pail are of a good size for the bearing vines. The Hamburg and Muscadine succeed finely cultivated in this way.

A great convenience of pot-culture, consists in the small space which the vines occupy, and the perfect control of position, as circumstances require. Any vacant portion of a small or large green-house will afford the required space; a moderate or a rapidly forcing heat may be given them, observing to keep the temperature of the roots a little above that of the air. If forced, the fruit will ripen by the first of summer, otherwise three or four months later; and if set aside in a cool room, the late ripened grapes may be kept on the vines for months, during which time they may even be employed as a parlor ornament.

The Bourbon County (Ky.) Ag. Society has reached its *Twenty-fifth Annual Fair*, which is to be held at Paris on the fine grounds belonging to the society, Sept. 4-7; President, Brutus J. Clay—Secretary, A. M. Brown.

HINTS FOR THE SEASON.

The summer harvests are now secured—the chief and remaining labors of the season are the sowing of winter grain, and securing the crops of autumn. But there are many other operations that should not be neglected.

In many places there are muck swamps, now comparatively dry, that may afford a large quantity of the material for manures. If it may be shovelled or drawn out on a dry platform or hard earth surface, it will be more convenient for drawing in winter. A large pile of this kind, thatched with straw or covered with a rough shed, will continue to become drier till winter, by which two important points will be gained. Swamp muck, when saturated, contains some five-sixths of its weight of water. The labor of drawing when wet would therefore be six times as great as when thoroughly dried. Wet muck will not absorb the liquid parts of manure—but when dry it will take in and hold several times its own weight. The great point therefore, in using peat or muck for composting, is to get it thoroughly dried.

Compost heaps, for farm use, should be made wherever practicable, near the field or spot to which they are to be applied, with a view to save cartage. If large muck-heaps can be deposited at those places, a great advantage will result; for the stable cleanings, as they accumulate, may be drawn out there and laid in their alternating layers with the muck, the new heap being made closely alongside the oblong pile of muck. If the swamp happens to be near a remote part of the farm, which is to be enriched, many days labor in drawing first to the barn-yard, and then back again, would thus be saved. By making quite thin alternating layers, the labor of mixing over may be avoided.

Preparation should be made early for ample winter shelter for stock, where not already fully provided. One-third of the amount of food consumed by animals is saved by proper warmth; one-third more, in value and insurance to the animals, and dairy animals give about one-third more milk and butter. The farmer who has, say twenty head, will thus save about one hundred and fifty dollars each winter, according to a safe estimate—an amount which would soon pay for the whole expense of the buildings,—to say nothing about the increased value of manure where facilities are afforded for saving it.

Wet portions of ground, which could be neither cultivated nor drained in the spring, if now submitted to thorough underdraining, will be increased immeasurably in value.

Briers, elders, &c., if cut immediately, will be much checked in growth another season; and if the process is repeated, will be mostly destroyed.

The vacant portions of time which every driving farmer may secure for this purpose, should be expended in building stone fences or walls. Such walls should always be laid in a trench as deep as frost usually penetrates, filled with small stone. Unless this is attended to, the heaving and subsiding yearly by frost, will ultimately throw down the most perfectly built wall. A good stone fence will never decay, and the removal of refuse stone from the land is a great advantage—let it be therefore not neglected.

Root crops, which have been kept clean during the early stage of their growth, are apt to be now neglected and become weedy. By dressing them out when needed, the crop will be better, and the ripening and scattering of seeds for a troublesome crop of intruders another year will be prevented.

Cellars should be thoroughly cleaned, ventilated, white-washed when needed, and prepared for the crops of autumn vegetables—that these may be kept neat and in perfect condition. A cellar in confusion and infested with foul matter, is a most unsuitable place to stow eatables; while one neatly kept and handsomely filled, is an interesting sight.

Hogs should be fed early to fatten—a few weeks at the commencement, early in autumn, may be more than equal to as many weeks towards winter. Keep them clean, and they will thrive better; feed them regularly, and they will fatten faster; and as there is an abundant apple crop this year, half the cost of fattening may be saved by feeding refuse apples in sufficient abundance.

Do not neglect to save a good supply of the best selected seed corn. In cutting up corn, a great deal of valuable fodder is lost by carelessness in putting up the shocks. If they stand erect, the stalks will be uninjured; if they incline or become prostrate, the fodder will be half rotten and of little value, to say nothing of the diseased and feeble animals resulting from feeding such stuff. Be careful, in putting up the shocks, to place the stalks evenly and compactly on all sides, and tie them up firmly, and they will remain so; but pile them all on one side in a careless manner, and they cannot stand. We occasionally pass a corn-field in autumn where the shocks stand as they should do; but more frequently we see many prostrate heaps.

DRILL CULTURE—PLOWING IN GRAIN.

The *Homestead*, (Hartford, Ct.,) after some discussion of the Drill vs. the Broadcast system of sowing seed, remarks as follows:

“An approximation to drilling is covering with the plow—running broad, shallow furrows, so that the ground shall be left in ridges between them, the grain being first sown broadcast. When it grows, it springs up almost exclusively on the ridges; here will be a double depth of soil—in wet land drainage will be provided—on all but very dry or washy land, no danger will be apprehended from either too great dryness or washing out of the seed or young plants before they are well established, and after they cover the soil and begin to tiller, there will be no danger from either of these causes. Land in such shape will take the sun better; there will be less danger from winter-killing—the ridges keeping dry. Moreover, if the snow blows off, only one side of the ridge will be exposed—if injured, that on the other side will fill up the space.”

“These arguments,” adds the *Homestead*, “are presented for criticism without our experience or observation to back them. We think it would be worth while to test the practice thoroughly side by side with drilling and broadcast sowing,” where the grain was covered by the harrow.

In some sections of this State, wheat is frequently sown broadcast and then covered with the gang-plow, and one of these implements is manufactured in Niagara county with a seed-hopper attached, so as to sow the grain and cover it at one operation. Most usually, however, the seed is distributed by the hand, then covered with the triple-gang—which does its work very well on any soil fit for wheat-growing. The field is harrowed before sowing, so that the grain may lie on a nearly level surface, and the gang-plow covers it very uniformly from three to five inches deep, leaving slight ridges, and throwing up the loose clods and stones, so as to make a rougher surface than would be left by the harrow. The grain springs up more or less in rows along the top of the ridges; not, however, with nearly the regularity of drill sowing, nor is it

as uniformly covered properly. If the furrows run up and down the slopes, and are provided with an outlet ditch through the hollows, they act as drains—otherwise they rather hinder than help the passage of surface water. It is true, however, that the tops of ridges are generally dryer than the soil would be were it level, and may thus be beneficial in the wet weather of the season.

The great objects of plowing in grain are, we believe, first to secure a better and quicker germination of the seed, and second, to give the field a rougher surface, which better holds the snow from blowing or melting away, and affords an important protection for the young plants during the season of frosts, preventing in a considerable degree winter-kill or heaving out. It is well known that from the effect of wind, a field with a smooth surface—one, for instance, rolled down after plowing—will be bare of snow, while a field left with the furrows untouched will retain a considerable covering. It is also true that after the snow has gone, but while frosty nights are frequent, level soils suffer more from heaving out than rough ones—the ridged land, moreover, crumbling and falling down by day, covers to some extent the roots lifted at night. The spring rains may also have the same effect. These are some of the reasons for leaving wheat fields with a ridged surface, as in plowing in, and to some extent in drilling, and in covering with a coulter harrow.

But to return to the first object—the better germination of seed secured by covering with the plow. At the time for sowing winter wheat—very often the surface soil is too dry—sown broadcast and harrowed in, it would be covered with the dry soil, and lie waiting rain, perhaps weeks, before germination. The gang-plow covers more deeply, and brings the seed more certainly in contact with the moist earth. This enables the farmer to sow his wheat with safety, without waiting for rain until the best time has passed by. Wheat, of course, can be plowed in with a single small plow, but not as rapidly as with a gang.

The above are the arguments of those who have long practiced and observed this method of covering winter grain; we offer them in part for our friends of the *Homestead*, but more for those who may not have tried this method for themselves.

[For the Country Gentleman and Cultivator.]

The Law of Reproduction with Fruits and Seed-bearing Plants.

ENS. CO. GENT.—Although the above topic may have been extensively discussed in our agricultural or horticultural works, yet it has never been my good fortune to meet with an article on the subject, and, believing it of much practical importance, I propose to offer a few suggestions, hoping that some abler pen will take up the matter and discuss it as it deserves.

It is a common saying that "like begets like," and in the formation of fruits and herbs, each was appointed to yield "seed after its kind." Still we are constantly told that "it makes no difference what kind of apple-seeds we plant, we never know what the fruit will be till seen."

And the same is true also of peaches, pears, cherries, and the endless varieties of fruits produced; their seed gives no assurance as to what quality of fruit we shall gather.

Is not the same true of squashes, melons, cucumbers, beets, carrots, and the endless varieties of vegetables and seed-bearing products with which our fields and gardens abound? We plant summer squash, and gather pumpkins or a cross between pumpkins and squashes which is only fit for pigs. We sow blood-beet seed, and gather white beets, pale red ones, and a few such as our seed purported to be, and turn away with impatience to accuse

Nature of being false to her professions. But is she so? On the contrary, is there not an important law of hers which we have failed to observe?

The law is this. Different varieties of fruits and flowering plants mix, by the pollen of the one falling on the stigma of the other. The immediate product is not thereby materially changed, but the seed is; and the result is developed in the product of the seed when sown.

Thus, I have growing in the same orchard, Seeknofters, Spitzenbergs, Baldwins, and Northern Spies. Desiring to increase the number of my Baldwins, I plant the seed of that fruit; but when it comes to bear, behold I have neither Baldwin, Northern Spy, or anything else such as my orchard had previously borne.

Again, I set in my garden—for seed—a blood beet, a turnip beet, and a sugar beet. They are in close proximity, it is true, but I gather the seed with care; put the different varieties in different papers, label and put away for future use. On sowing my different varieties in different beds, I find the product "all mixed up." I have neither blood beets or turnip beets or sugar beets where they belong, but all sorts and no sorts, any where but where they were sown. Now, where is the trouble? Simply here. I set my seed beets where they mixed in flowering time, and the result is seen in the heterogeneous mass of stuff which is grown on the different beds.

The same principles apply—with certain limitations—to all flowering products. The mixing is in the seed, by reason of its having been produced where its flower was impregnated with the pollen of some other variety of the same general kind. Farmers sometimes say their potatoes mix by planting in proximity. This, however, is a mistake. The seed within the balls mix, and if they plant these, the result will be some new kind. Their corn mixes, it is true, by planting in proximity; and so doubtless do their wheat and other grains. But here the seed and the fruit are identical. You cannot separate them as you can an apple from its seeds; a melon or a squash from its, and a beet and turnip from theirs.

White corn and yellow corn, side by side, will mingle their varieties on the same cob; but separate these varieties and plant again at respectful distances, and there is nothing more seen of the mingling.

The conclusion of the matter therefore is, that Nature is not treacherous to her laws. She observes the rules given her at the beginning; but, if we would produce from seed, plants such as we desire, we must know that our seed has been kept free from mingling with other varieties of the same general kind, during its flowering stage.

Clinton, August 3, 1860.

S. W. R.

NEW JAPAN PINKS.

Several new varieties of Pinks have been introduced into this country this spring for the first time, and have just flowered with us.

Dianthus Chinensis Heddewigii, or Heddewig's Japan Pink, is a dwarf annual growing six inches high, bushy, flowers borne on a short upright stem, and which are about two and a half inches in diameter, of colors generally a marbled velvety crimson, sometimes rose or violet. The flowers are single and open well, with flat and smooth petals deeply fringed. These pinks, it is said, will be in flower three or four months.

Dianthus Chinensis Laciniatus, a perennial variety, much similar to the last, but with finer leaves and more straggling in habit of growth. The flowers are larger than Heddewigii, being fully three inches in diameter, of various colors; some double but generally single; said by Mr. Heddewig to blossom from the end of May until the beginning of frost.

These new pinks we think will become great favorites; they are certainly remarkably brilliant and showy flowers. Another season we presume the seeds will be sold at such a price that persons in moderate circumstances can afford to purchase them, the price this year having been what may fairly be termed a "fancy" one, viz., fifty cents for twenty seeds.

G. B. H.

"GRASS AS A MANURE."

In a recent article on the "Manurial Resources of the Farm," we put grass-growing in rotation with grain crops as the first grand resource of the farmer for raising and keeping up the fertility of his soil. Having since noted several facts bearing upon this subject, which may tend further to illustrate and enforce the importance of attention to this fact in husbandry—"that the growing of clover and the grasses lies at the foundation of all profitable farming," we note them for our readers.

That on many of our natural wheat soils good crops of that grain have been grown every three years, and even every other year for many successive periods, is a well known fact. We find in the Rural New-Yorker of July 21, a letter from P. Hathaway of Milan, O., who for twenty years raised wheat annually on one of three fields, the wheat being seeded in spring to clover, dressed with a bushel of plaster per acre, pastured the next season, and then summer fallowed and sowed to wheat the third year. "The depth of plowing was uniform—what a yoke of oxen and span of horses attached to a No. 4 Iden plow could accomplish." The average yield of wheat for the first seven years was twenty-six bushels per acre; near the close of the term, thirty-six bushels, and now, on the same land, he had wheat growing which will yield from twenty-five to thirty bushels per acre, and this sown on oat stubble with two plowings. "The midge," he adds, "for a time was a baffling pest, but now, when we escape its ravages, the land proves itself unimpaired in fertility."

While we would not advocate any severe course of cropping tending rapidly to exhaust the soil, we would advise farmers to grow all the clover and grasses possible, if they would keep their farms fertile and productive when devoted to grain. As long as a soil with the aid of a bushel of plaster per acre will grow heavy crops of clover, we need not fear but it will grow grain crops at suitable intervals without further application of manure. We may find it most profitable to feed the grass grown to stock, taking the manure they supply meanwhile in return; still this would only be grass in another and (for this purpose perhaps) better form, with some additional elements gained from the animal organisms through which it has passed. But we did not intend to attempt any discussion of this branch of the subject.

Among the questions proposed to every competitor for a farm premium by our State Agricultural Society, is this: "What do you consider the best mode of improving the soil on your farm?" with reference to the different kinds of soil, clay, sand or gravel; and it is curious to observe how uniform have been the answers received. One (in the Transactions of '58) plows greensward under in the spring for corn; "likes to have a coat of grass on the turf to turn under;" some apply manure during the course of cropping before again seeding to grass. Another says: "My method of increasing the product is by the use of plaster (sown on clover;) on the 'home farm' I also use barnyard manure." Another top-dresses his meadows, to increase the growth of grass with a portion of his stock manure, while another puts all his manure on his newly seeded grass lands. These are mostly dairy farmers, who yet grow a considerable share of grain for home consumption.

Turning more particularly to the grain growing farms, we still find grass, and clover particularly, the basis of their improvement. "A clover lay of two or three years turned under in May for corn, or in August for wheat," is the

general rule, applying manure, if at all, to the corn crop before plowing. Another takes care to return to grass before his soil is over cropped with grain, depending upon the former for the power to produce the latter, and we may say that it is a dependance not likely to be misplaced, if we give the grass crop the attention which it merits both from its intrinsic value and the place which it must hold in all self-sustaining, farm improving systems of agriculture.

"When we manure our meadows plentifully," says Thae's *Principles of Agriculture*, "we are quite sure of a sufficient supply for our arable land," and when we find a farm under management rendering it capable of producing good crops of grass for pasturage or mowing, as said before, we may rest assured that it is really fertile, and may easily be continued so. A limited supply of manure, we think, would go farther if applied early in the fall (in a fine state) on sward land than in any other way. It would tend largely to thicken the turf by increasing the growth of roots and leaves beyond what would otherwise take place through the autumn and winter, as well as giving it an earlier start in spring—benefitting, in fact, both as protection and nourishment. Its value would be enhanced by this result, and the turf, when plowed under, would furnish a rich manuring for any desired crop. Deep plowing, draining, irrigation, any means to promote grass growing will give us at the same time profitable grain farms on all soils suited to its production, as, indeed, to one kind or another, most soils are.

WHEAT—THICK vs. THIN SEEDING.

The season of sowing is once more at hand, and the matter of seed and its commission to the earth is again and increasingly, we believe, receiving the attention of farmers. No course of conclusive experiments has as yet settled the important question as to the proper quantity of wheat for seeding an acre, or decided definitely and authoritatively on the contest of Thick vs. Thin Seeding of this and other grains. Much has been said and written upon the subject, but the experiments detailed as proof, point to such opposite conclusions that both sides claim the decision in favor of the mode which they have practiced. Thick seeding was most popular when the drill system was brought forward, resting in part its claims to superiority on the saving in amount of seed, and bringing strong testimony in its favor. Evidence equally conclusive is abundant on the other side, and thus the question seems left to the judgment of the individual directly interested—the farmer himself; he must follow his own views—employ his own discretion—and sow the amount of seed he thinks will produce the best crop.

Under a perfect system of tillage—giving all the ground and all the strength of the soil to the one product of wheat—no doubt the rule would hold good, that the greater the number of perfect stems and heads per acre, the greater the amount of grain produced. Such would seem to be the teaching of the experiments given in our State Transactions for 1849, where wheat sown in squares one and a half inches each way, taking nearly four bushels of seed per acre, gave a product of almost seventy bushels, while one-fourth the amount of seed, in squares of three inches, gave fifty-one bushels; and other trial plots, using two bushels of seed, and three-fourths of a bushel, gave respectively products rating at sixty and at forty-five bushels per acre. English experiments give about the

same result, pointing strongly to an even distribution of the seed over the ground on all clean soils. Weeding, where needed, compensates for the loss of space in drill-culture, and we are not without experiments showing thin seeding very favorably by the side of the more liberal supply, especially in cases of early sowing on rich or very carefully cultivated soils.

These various discussions and experiments point at least to one fact for the guidance of the farmer—but one very generally known and considered—that rich, deep thoroughly worked soils do not need as great an amount of seed as those of a less fertile character. In the early settlement of the great wheat section of this State, farmers long practiced sowing about one and a half bushels, or less, per acre, and on their fresh, unworn soils, doubtless raised as large, if not larger crops than they would with more abundant seeding. As the years rolled on, the amount of seed was increased in many cases to two and one-fourth to two and a half bushels, the plant showing less disposition to tiller and grow luxuriantly than before. The use of the drill effected a saving of at least half a bushel per acre, from the greater certainty of germination when covered to a uniform depth, over the variable amount of soil given when covered by the harrow.

It is found also, that the amount of seed necessary is effected by the variety of wheat, as well as the soil and the time of sowing; some kinds showing more disposition to tiller than others, and all making a greater number of stems when gaining a fair growth in autumn. Their influence should be considered by the farmer, but we would not advise him to rest satisfied with the fair results of thin seeding induced by the scarcity of seed for the last few years, but to give a full trial to the long settled practice of the best wheat-growers of ancient and modern times, in seeding liberally with a pure article of carefully selected grain, remembering that in this respect as in all, "as ye sow, so also shall ye reap."

USE OF THE CLOD-CRUSHER.

SANFORD HOWARD states in the Boston Cultivator, that the following course is successfully pursued in Scotland with the clod-crusher. It is of course only used on heavy clay lands, which on plowing, break up into large clods; and the land must be comparatively free from stone. The soil having been plowed, and left in large clods, a grubber is passed over the whole, loosening up the clods, and leaving them at the surface. The grubber, as our readers may be aware, is like a harrow or cultivator, with long hooked teeth, which loosen the soil as deep or deeper than the plow has run. The clod-crusher is next passed, which breaks the clods into fragments, at the same time it tends to press the soil too compactly together. An indispensable part of the operation is now to follow with a grubber to loosen the crumbled soil.

We may add that heavy and tenacious soils, which have been regularly drained, and are judiciously managed, do not often become a mass of large clods, yet this is sometimes the case when hot, drying weather succeeds heavy rains, before plowing can be accomplished. In such instances, the successful planting and cultivation of a crop, could not be expected. We have known a corn crop to be nearly doubled in product by the use of a one-horse clod-crusher between the rows, to reduce the lumps into mellow earth. On undrained clay soils, its use would undoubtedly be often eminently advantageous.

[For the Country Gentleman and Cultivator.]

Travels in Iowa—Farmers' College.

MESSRS. EDITORS—I left Muscatine July 24, for the College Farm in the centre of the State, 175 miles—38 of which is by railroad to Iowa city, and the rest by stage and on foot. At present this farm is between three principal routes of travel, one west through the Capital, one up the Des Moines valley, and one up the Iowa river. It is on the route of the Chicago, Iowa and Nebraska railroad.

It may be thought wild to talk about railroad routes in Iowa; "they were exploded two years ago." If persons could have traveled with me nearly 400 miles last week and this—if they could have seen the beauty, goodness and greatness of this agricultural and horticultural country—if they could have seen the beautiful golden harvest in shock, and the beauty of the uniformly and luxuriant growth of corn—not the wonderful great crops, but the *wonderful ease with which they are produced*—they would have understood and rejoiced with me at the sure prospect of the rapid advance of this country in all the improvements of the east. And even now, in these "exploded" times of the west, they are laying the iron rail 17 miles west of Iowa city, and will soon have it 30, up to Merango. And on my return, as I left Iowa city, we had 16 loaded freight cars, and before I left the train, in 26 miles, it had increased up to 30. The quantity of freight will be greatly increased from month to month.

The cattle look as fat and sleek as otters, running at large, and in this dry time gathering in herds about the streams; mostly scrub stock, but many very fine Durhams, and occasionally a fine milch cow. Our farmers are beginning to appreciate the difference between a scrub and a large well formed *Durham*. Quite an improvement in the breed of hogs of late. Sheep few. Mr. Grinnell of the town of that name, has brought in this season 2,000 fine wool. Our country is not half stocked with animals, and our farmers are determined to increase it until their stock will consume their great crops of corn. We must count on the amount of money we can get for a ton of produce—wool first, butter and cheese second, beef and pork third, and flour fourth.

This season has been a hot and dry one, having a spell of drouth in every month, beginning with March and ending with July, for lately we have had a bountiful pouring out of showers over most of the state, and probably all; for although it was dry and the corn leaves were rolling up when I came down the Iowa river two days ago, since then I have seen copious showers. This completes the crop of corn, and it is as heavy as I ever saw it in Iowa, and forward—many pieces in roasting ears this 3d of August.

Wheat first rate. In a former communication I had said it would be a good average crop, but it is above. I have heard of some being threshed which yielded 30 bushels per acre, spring. It is of best quality, plump and clean; I never saw it harvested so promptly in good season—a little tardy in stacking, but probably these showers will not continue long enough to sprout it—price 65 cents a bushel.

What is the prospect of foreign demand? We first hear of failure of crops in much of Europe; then "the probability is there is not much failure." Is not this "probability" for speculation in grain? Is it not English policy and American dealers' policy, to cry up the quantity and cry down the price?

COLLEGE FARM.—We have 648 acres of land, timber and beautiful rolling prairie—70 acres in crops—120 under fence—a good bank-barn 42 by 60 being built—brick burned for the kitchen, wash-room and wood house of the farm house, and when these are all paid for we shall be at the end of our first \$10,000, appropriated by the State two and a half years ago. We have no session of our Legislature next winter, and we shall wait patiently one and a half years to put up our College buildings, when we hope in three years to open our farm school. SUEL FOSTER.

Muscatine, Iowa, Aug. 3.

[For the Country Gentleman and Cultivator.]

Harvesting and Keeping Root Crops.

MESSRS. EDITORS—In complying with the request of A. J. M., in the CO. GENT. of July 12, present vol., I shall perhaps be able to say but little that is not already familiar to the most of your readers; as my experience in harvesting and keeping roots will not vary materially from the recorded experience of others.


In harvesting roots, I begin with mangolds and turnips, which should be taken up before there is any hard freezing weather, as in consequence of growing more or less out of the ground, they are more likely to be injured than other kinds that grow mostly below the surface. Mangolds are pulled, first, in consequence of growing a considerable part of the root out of the ground; they can generally be pulled by hand without any trouble; but where this is not the case they should be loosened with a spade. They are spread on the ground a few hours to dry, when the tops are cut off, and those intended for winter feeding are taken to the cellar; and the portion that is intended to be used in the spring buried in round shallow pits about one spade deep, twenty-five or thirty bushels in a pit. The same course is pursued with turnips, which are next gathered. Carrots I have always taken up with a spade; but where there is a large piece, it would be better to run a plow close along one side of the rows, and turn away the ground, so the roots may be turned out into the furrow and easily pulled by hand. Parsnips can be taken up in the same manner as carrots, that is, those that are wanted for winter feeding. All that are not wanted until spring may remain in the ground until that time.

All the curing I have ever given to roots, or supposed they needed, was to let them dry off a little, and that is mostly done to allow whatever dirt may be attached to them to get dry, so that by handling them the most of it will rattle off, and which, as my land is a sandy loam, and they come out of the ground pretty clean, is all the cleaning that is found necessary as a general thing, though some kinds of turnips will have more or less small fibrous roots that will hold the dirt. In such cases I scrape the fine fibers, dirt and all off, with the back of a large knife that is used to cut up roots with. But this is not done until they are wanted to feed, for the reason that roots, to keep well, should be bruised and mutilated as little as possible.

There will be much less trouble in digging, cleaning and taking care of roots, if it is done before the long heavy rains, late in the fall, make the ground wet and muddy. From the first to the tenth of November is generally the best time in this latitude. In cutting off the tops of all kinds of roots, care should be taken not to injure the crown of the plant, as they will keep much better when the stems of the leaves are cut off just above the crown, where the last leaves are starting out.

The best method of keeping roots through the winter, I have ever tried, is to bury them; as when it is well done, they will come out in the spring as fresh, tender and sweet as when they were first pulled. In burying roots plenty of straw must be used. It should be put on the pile in the manner best calculated to carry off all rain and snow water, so as to keep the roots as dry as possible. About half the amount of dirt that is necessary to keep potatoes from freezing, will be all that ought to be put on roots, as a little freezing don't injure them in the least, while if kept too warm, they will grow badly, and sometimes rot. Each pit should be finished, and covered for winter, the same day it is begun, as if left open a day or two, or longer, mice will be sure to find it, and make nests and winter in it, destroying more or less roots, and sometimes making a good many holes through the covering, letting in water, and causing them to rot.

P. F.

 The Regulations and Premium List of the Iowa State Agricultural Society for 1860, are at hand. The exhibition takes place at Iowa City, October 2-5; President, Hon. G. G. Wright; Secretary, J. H. Wallace, Muscatine.

[For the Country Gentleman and Cultivator.]

"BALLOON FRAMES"—5th Article.

There is at the present time among monied men who seek investment for their capital in the construction of buildings, a desire to ascertain the very nice point that limits the union of economy and absolute safety, and this point to which one may approach with confidence, and never, under any circumstances, go beyond, is a leading subject of study for the Civil Engineer and Architect. It has been stated by a distinguished Civil Engineer that the failure of a bridge, or any work, under the proper tests, conveyed a better lesson than its success, as illustrating the position of that point which theory alone can never so well show.

It takes many years of experiments to overcome popular prejudice, brought up to believe that a certain amount of strength, weight, size and labor are requisite for a certain result; we look with suspicion on any one who has the energy, the courage, or the impudence to pronounce the old fashioned mortice and tenon timber frame, with its heavy beams, wasteful extravagance of timber and labor, a relic of by-gone days handed down to us with all the prejudices and ignorance clustered around it. Every day we can see examples of such frames changing shape or tumbling down with their own weight, built with a condition that they shall be strong enough to support themselves, and then sufficiently strong besides for the uses intended, a double motive the balloon frame does not require.

Many mechanics will say the balloon frame is a humbug, an impracticable affair, or, at best, only adapted to the smallest of frames; they are evidently not posted, or else they consider the balloon frame a sad innovation on their business. Certainly the business of framing with heavy timber is somewhat interfered with, but then there will be none the less money expended in building. If men can put up buildings cheaper, they will build them larger, or build more of them.

There is, however, the undeniable and indisputable fact in every town and city, and on nearly every farm in the great west, and in California, that the balloon frame is not a humbug, is not impracticable, but is used indiscriminately for every grade of building required, and has been used since the early settlement of that portion of the west beyond Lake Michigan, say from twenty to twenty-five years, and thoroughly successful.

On the outskirts of some of our large cities of late years there have been many attempts made to cheapen the mortice and tenon frame. Economy certainly has been introduced, but at the expense of strength and security. We have seen sticks three by five inches used as posts for two story buildings, having a tenon on each end, and ten mortices cut in its length to receive the girts and braces—in other cases the braces are beveled to the angle and nailed to post and girth. Others introduce some peculiarities of the balloon frame, but as a general thing these frames are very inferior to the genuine balloon frame, and cannot be erected at so low a cost, and do not possess those qualities of strength and security. We have seen mortice and tenon frames in the upper part of New-York city that are as light in every particular as the balloon frame, and every way inferior—inferior because the original strength of the timber is cut away, and the thorough basket-like system of tying, cross tying and diagonal tying not being used. An ordinance should be passed requiring such buildings to be put up with a balloon frame, for two reasons; one is the buildings would be stronger and safer; the other is that it would be economy for the owner.

We have seen it stated* that "the most prominent fault of the balloon frame is the dependence put on nails," that "it is liable to get out of place and constantly grow weaker by the corrosion of the nails, and the wearing of the nail holes." Upon the same principle the most prominent fault of the Niagara Suspension bridge is the dependence placed on the small wires that form the cables.

Corrosion of nails in permanent work is considered de-

* Patent Office Report 1859.

sirable, and adds much to the force required to draw a nail. We have sometimes recommended the use of green timber or studding to produce this very effect.

Wearing of the nail holes is an objection we cannot answer. We confess our inability to see how it can be produced, a case of this kind not having occurred in our practice. We have examined balloon frame buildings that have been erected 10 or 12 years, in exposed situations, without discovering any defect of this kind; rigidity is a principle of this style of frame, and the objection may be urged more forcibly against the old style. The balloon frame may be confidently relied on in the erection of every description of wooden buildings; there are, however, cases where it is not practicable to construct without making some use of the old fashioned principle of framing or use of heavy timber; for instance, a barn built on piers will require heavy sills; wide openings as sheds, doorways, &c., require heavy lintels, on the same principle that a bridge of 200 feet span must be built stiffer and stronger than if it had a pier every ten feet. Balloon framing requires a solid foundation for each stud, as each stud runs through the building, supporting its share of each floor and rafter, and will not admit of extra wide openings without a heavy lintel to support the weight above.

We see no objection whatever in the way of freely adopting the balloon frame, and very much can be said in its favor; it is absolutely safe and secure, and its economy a strong recommendation. We are willing to risk a well earned reputation in advocating its merits.

GEO. E. WOODWARD,
Architect and Civil Engineer, 29 Broadway, New-York.

NEW WAY OF RAISING CELERY.

The last number of the Horticulturist publishes a communication from "Fox Meadow," on the cultivation of celery, according to a "new theory," and which has proved very successful—single sticks having been grown, and after being washed and dressed for the table, have weighed *eight pounds!* The practice is undoubtedly an excellent one, but the theory needs crutches,—inasmuch as it includes the notion that the leaves "condense moisture" and send it down to the roots for their benefit. This is the same error as the old one that weeds shade the soil and keep it moist, when as every careful observer knows they pump up and throw off moisture from the earth at a rapid rate, which is the reason that the earth will be always found much drier on the removal of a rank growth of weeds, than where the soil is bare and exposed. The author of this theory does not *ridge up* celery, because the ridge throws off the water from the roots. Now if he will examine his celery roots carefully, he will find that the fine white fibres, of which they consist, have extended as far from the plants as he has made the mellow and composted soil, and that consequently ridging, if it had any sensible influence in this direction, would only tend to throw the water at the end of the rootlets, where it is wanted. He proposes to "copy-right" this theory, but we think he may as well omit it at present. There is one part of it, however, that is correct, but not entirely new, and on this his success depends, namely, that plants, and celery especially, grow and flourish with plenty of water—and this brings us to the practice, which is no doubt excellent, and which we give in substance:—

A bed is formed six to twelve feet wide and as long as convenient; the soil is dug out nine inches deep and thrown on each side; the basin thus formed is filled nearly full of old manure, which is then thoroughly incorporated into the soil below; set out the plants nine by twelve inches over the whole surface; soak it thoroughly, and shade for a few days. Then make an embankment around this bed a foot high, so as to keep it constantly saturated with water. Manure water or guano water is recom-

mended; but perhaps the stratum of nine inches of old manure, would manufacture enough of this, when the water is let on. The plants, as they grow, are merely loosely tied up with bass matting; and the young suckers and small leaves at the base, are removed. The trench or bed must never become dry—there should always be a puddle there. It is earthed up only three weeks before needed for use—any celery will blanch as white as a lily in three or four weeks. For this purpose, the soil thrown out in excavating the bed is returned. Late in autumn the whole bed is covered with forest leaves a foot or foot and a half thick, with a few cornstalks to prevent their blowing away. From this bed the celery may be readily obtained at any time, fresh, sweet, and crisp, during the winter.

This we have no doubt is an excellent method of raising and protecting celery—the mode of raising is founded simply on the principle of giving plenty of manure and plenty of water, and requires a large supply of water at hand—and that of covering, which has been practiced before, or the well known protective power of successive layers of dead leaves with their numerous thin interposed strata of air.

[For the Country Gentleman and Cultivator.]

PEA-NUT, OR GROUND PEA.

R. T. Brooks asks for information as to its culture, and as it is grown commonly in the south, I will give the information. The peas are hulled or the shell broken before planting—the ground prepared as for corn, rows three feet apart, and the seed dropped about one foot apart in the drill. The after culture, with a view to keeping down grass or weeds and the proper tilth of the soil. Bedding or hilling is not to be *practiced*. The plant is unlike any of the pea family in every respect. It has no bush or vine, but projects its limbs, horizontally, upon the surface of the ground, in length varying from one to three feet, and in all directions from the center or root. These limbs bloom as they grow, and in this respect are unlike any other plant with which I am acquainted. The bloom (small yellow,) rises on a slender stem and opens to the sun. After the germ is impregnated, the stem turns down to the ground and projects the young pea under the surface from one to three inches, where it grows to maturity. It requires clean culture and a loose soil. It is most commonly planted on our poorest land, for the reason that it makes more on that kind of land than any crop cultivated. We plant in March or April, and gather after frost. Yield from one to two hundred bushels per acre, measured in the shell, which is considered two-thirds of the bulk. Time to mature the crop, six months. We are indebted to the African for this valuable pea. Their name for it is *gouber*; the Indian name, *pindar*. P. T. GRAVES.

Lownds Co., Ala., July 31, 1860.

[For the Country Gentleman and Cultivator.]

Ginger Cakes—No. 1.

One pint of molasses.
One cup of butter.
One tablespoonful of saleratus.
One teaspoonful of alum, each to be dissolved in cup half full of boiling water.
One tablespoonful of ginger, and flour enough to roll out in little cakes. M. H. K.

A LARGE MILKER.—About a month ago we published (p. 29) the amount of Milk produced in five days milking of several Ayrshire cows, in competition for prizes offered in Scotland by the Duke of Athol. An extract from a Scotch paper of later date, states that the cow which then stood first, yielding an average of 26 lbs. 5 oz. of milk in each of 10 successive milkings, "improved wonderfully in the amount of produce after she was put on the grass. She lately gave the astonishing quantity of 75 imperial pounds, or 7½ imperial gallons of milk per day for several days in succession. The largest quantity at one milking was 39 pounds."

[For the Cultivator and Country Gentleman.]
GOOD WHEAT CROPS.

NEAR GENEVA, July 24th, 1860.

MESSRS. L. TUCKER & SON—Along with this you will receive a sample of my Mediterranean wheat of this year's growth. I think the sample superior to last year's, more particularly in the color than in anything else. I never saw Mediterranean wheat as fair as this. It is wonderful how it has improved in quality since I first sowed it. When you have examined, please hand it to my friend Col. JOHNSON to place in his State Rooms, and if he gets a better sample I would be pleased if he would let me know it. I may possibly send samples of the May wheat and Soules. They are both very fine. Mr. Swan has a very fine crop of Soules. The land was manured for the previous crop (oats,) then summer fallowed, and subsoil plowed before sowing the wheat. It is impossible to tell the yield until it is thrashed and measured, but I am satisfied that it surpasses his crop of Soules last year, and that gave 41 bushels per acre. In 1853, this same field, before it was drained or manured, gave not over 5 bushels per acre, when my drained and manured land gave nearly 29 bushels. Now I think it probable it gives a larger yield than ever I had. It ripened remarkably slowly. Was that owing to running the subsoil plow some ten inches below the first plowing, which was all of eight inches deep? Whatever was the cause, it is a remarkable crop—straw not long, but the sheaves almost as heavy as a hickory log of same size. Manure and good cultivation will do wonders, and manure will hide a multitude of faults in the cultivation. We will have all the wheat in that field (25 acres) in the barn to-morrow, if fair weather. We have had rather an anxious time in hay and harvest, having had great rains, yet I think the wheat will be all safe after all.

Truly yours,

JOHN JOHNSTON.

[For the Country Gentleman and Cultivator.]

Soil, Crops, and Fruit of Southern Illinois.

I enclose you a statement giving a pretty accurate description of Egypt. Fruit growing is beginning to receive much attention here. Eastern men are planting extensive peach orchards of choice varieties at or near the stations of the "Illinois Central Railroad." Apples and pears are being planted considerably also, and bid fair to do well. Taking into consideration the facilities for marketing, and the adaptation of the soil and climate to the growth of fruit, and I think Southern Illinois offers fully as great inducements as any locality this side of the Rocky Mountains, for peach growing, especially.

The soil of this region, especially in the timbered lands, is unsurpassed in productiveness; it is light and easily cultivated; the subsoil is of great depth and richness, capable of receiving and retaining moisture for a long time, and, as a consequence, the crops are but little affected by drouth.

Winter wheat is the staple crop; the yield is from 20 to 40 bushels per acre, of an average weight of from 64 to 66 lbs. to the bushel. Oats, rye, barley, buckwheat, millet, red clover, and timothy, are excellent crops. Indian corn is grown abundantly in all parts of the country, and yields from 50 to 80 bushels per acre; cotton is grown in the southern counties, but for domestic use only; tobacco is extensively cultivated in a few counties as an article of commerce; Irish potatoes grow well. The soil and climate are peculiarly adapted for the growth of the sweet potato, immense crops of which are raised.

Apples do well, and are a certain crop; peaches are unsurpassed for yield and quality; the soil and climate are eminently adapted to the growing of grapes; pears, cherries, plums and quinces do well.

Limestone and brick clay abound; quarries of superior sand-stone, both red and white, suitable for building purposes, are found in several of the southern counties; inexhaustible beds of bituminous coal, in strata from five to eight feet in thickness, underlie many portions of the State.

In Southern Illinois many mines are now worked, and the coal sent to market by railroad and river.

Good water is generally found by digging from twenty to forty feet deep. In the hilly country good springs are numerous.

In the fifteen southern counties of the State there is but little prairie; the surface in some parts is very hilly and broken, but generally agreeably undulating; swamps are not found except occasionally in the extreme south, on the low grounds near the Ohio and Mississippi rivers. This portion of the State is covered with a heavy growth of white, black, red burr and post oak, yellow poplar, hickory, ash, gum, sugar-maple, walnut, hackberry, pecan and other timber, with an undergrowth of dogwood, sassafras, pawpaw, red-bud and innumerable wild grapevines.

The climate is temperate; there is neither the protracted cold of the north, nor the sultry heat of the south. The thermometer in the shade rarely indicates a higher degree of heat than 90, or a lower than 10 above zero. The ground is invariably clear of frost by the 1st of March, and in good plowing condition during the same month. Ordinarily the wheat harvest begins about the 10th of June, thus giving to the farmer several weeks advantage over his brethren of the north, in marketing his wheat. The autumn months are dry and pleasant; frost rarely appears before the 1st of November, nor snow before the 1st of January.

A. BABCOCK.

PLOWING IN CLOVER—LIME.

Some discussion on the policy of plowing in clover, buckwheat, rye, &c., as a manure, has recently taken place, in which examples of both good and bad results are given. In reply to the statement that there was liability (if the amount of vegetable matter turned under was large,) of souring the land by acetous fermentation, the Homestead says that slaked lime, either sown before plowing, or strewn along the furrow, or better applied both ways, is a certain preventive from any injury by this cause. "The result is a quick, and so to speak sweet fermentation, and a rapid conversion of the whole of the vegetation into good manure." Ashes are valuable for the same purpose.

Another writer on this subject, in the N. E. Farmer, thinks that "in plowing under a heavy crop of clover for wheat, or any grain or farm crop, instead of turning it under when in the blow, I think it would be better to wait till the crop is about half ripe, or half the heads are dead. In this way a good share of the acid would have left the stalk, so that decomposition would readily take place without at all souring the soil."

Hardiness of the Pear and Peach.

EDS. CULT. AND CO. GENT.—As I am preparing to plant a pear orchard, I take the liberty to trouble you with a few queries:

1. Can the pear as a general thing withstand a spring frost while in bloom or after, without inquiry, as well as the apple, other things being equal? [The pear is more certain in its crops than the apple, and less liable to the accidents of the weather, while the tree is more subject to maladies. We often have good crops of pears when the apple fails.]

2. If peach trees are kept well cultivated and shortened in, and the young fruit thinned out when the trees are too heavily loaded, will they not be less liable to fail in producing annual crops, on account of frost, than neglected trees on the same ground or location? [We have never discovered that this treatment had any influence in protecting the peach from the effects of frost—if any effect is produced, it must be very slight.] A. BABCOCK.



THE GOAT.

The common Goat is not in much request in this country or in England, but in some other countries, as Syria and Switzerland, herds of goats are kept for the sake of their milk, and in fact almost entirely take the place of the cow. The most celebrated variety of this animal is the Cashmir goat, which furnishes the beautifully fine wool from which the costly Cashmir shawls are made. The shawls bear a high value even in their own country, but in Europe the price is much increased by the various taxes which are paid in every stage of the manufacture—the average number of taxes paid on each shawl being about thirty, several of which are limited only by the pleasure of the collector. So says Wood's Natural History.

There is a popular fancy that goats, kept in stables with horses, improve the health of the latter. Bell's British Quadrupeds, in referring to this notion says that although seemingly absurd it is "found upon reflection to have some foundation. All animals are kept in better temper and greater cheerfulness by the presence of a companion, than in solitude; and the active and good humored goat may, in this way, really perform the benefit which has been attributed to it upon mistaken grounds."

It is said also that goats can subsist upon vegetables that are noxious or even poisonous, to other animals. If so, it is probably a part of the great creative scheme to provide for the consumption, and the keeping within necessary limits, those species of vegetables which having their special utilities, would acquire an *undue preponderance* if not kept in check. Partington's Cyclopaedia remarks:

In feeding, goats are very indiscriminate, and many plants which are not only shunned by other ruminating animals, but act as poison to them, are not only eaten with impunity, but relished by them. There have been instances in which tame goats have chewed tobacco; and, in the wild state, they eat the most bitter and narcotic plants, such as euphorbium, hemlock, henbane, and even digitalis, without suffering any injury. Few plants are more disrelished by cattle than the common rag-weed, and therefore the pastures on those lands in upland and humid situations are very much infested by it; but goats clear it off, if allowed to browse the plants before they come into flower. There are many of the *compositae* which are the pests of our pastures, and which are, generally speaking, biennials, making roots the first year, and bearing flowers the next, which might probably be cleared off by pasturing with goats at proper times. The alteration with each other of animals, one set of which can eat the plants that are disliked by another, is an important point in the economy of our grazing districts, though it does not appear to have received that attention to which it is entitled.

Produce of Milk, Cheese and Butter per Cow.

The following statement, from Morton's Hand-book of Dairy Husbandry, gives the produce per cow of Mr. J. T. Harrison of Gloucestershire, England:

The following are the results of my experience in dairying the last few years. In 1857, having plenty of water, we made all the cheese with the machine, and it proved the most profitable year. I milked 55 cows; the quantity of milk made into cheese was 31,728 gallons, or 577 gallons per cow, besides the milk expended in weaning 43 calves:—

	£	s.	d.
The actual return for cheese was.....	615	0	0
do. do. butter was.....	182	6	10
do. do. milk sold and used was.....	6	0	0
do. do. whey, 220 hogsheads, at say, 6s.....	66	0	0
do. do. rearing 43 calves was.....	43	0	0
Total.....	£912	6	10

or about 16l. 10s. per cow.

The following are the returns of other years, including the same particulars:

	Dairy Cows.	Per cow.	Cheese per cow.	Butter per cow.
For		£ s.	lbs.	lbs.
1855.....	30	15 0	361½	62
1856.....	45	16 0	423½	64
Machine made, 1857.....	55	16 10	459	62
1858.....	62	12 5	387½	38
1859.....	60	13 5	366½	39

In 1858 and 1859 we could use the machine only about two months for want of water. The diminished yield in these two years I attribute in a great measure to the excessive dryness of the season; other circumstances affecting the cows likewise contributed to the result. In 1858 the price of cheese was not so good, and the quality was inferior, especially that made during the autumn.

A PROFITABLE DAIRY.

A subscriber of the Genesee Farmer sends to that paper the following statement as to a small Dairy belonging to Mr. Edward Hoyt, that took the first premium at the Delaware County Society's Annual Meeting.

This dairy consists of six 'native' cows, of the following ages: two 7 years old, one 6, one 5, and two 3 years old—calved from the 10th to the 26th of March, inclusive.

Amount of Butter made.....	1,230 lbs.
do. do. sold.....	1,085 " \$230.61
Butter used in family.....	145 " 30.45
Pork made from milk.....	30.50
Calves and Colt, raised by hand.....	18.50
One Veal.....	5.50
Three Calf-skins.....	2.40
Milk used in the family.....	10.50
	\$328.46

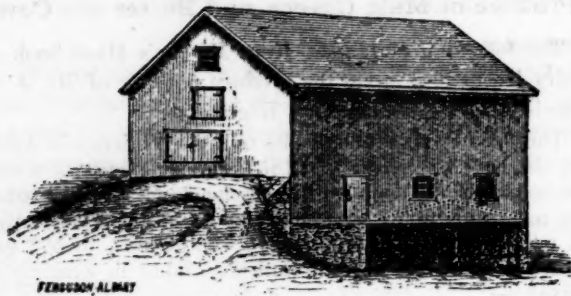
Deduct expenses, freight, corn, etc., 20.26

Net income from all sources..... \$308.20

After deducting one-quarter each for two 2-year old heifers, the net profit per cow—5½ cows—is \$56.04.

Rats in the Granary.

A gentleman whose granary and premises generally were overrun with rats, writes to the editor of the North British Agriculturist, that he had tried "all the various nostrums which vermin destroyers and rat killers recommended," and that all, without exception, had miserably failed. They did, indeed, manage to kill several, but in a short time the rats seemed to swarm as thick as ever. They were so plenty and so tame that they would feed with the pigs in the same trough, and crouch around and even on the backs of the cattle when resting in their stalls at night. Even shooting a few of them did not seem to scare them away, or sensibly thin them. He was greatly distressed and almost desponding of ever getting quit of them, when a neighbor recommended a trial of cats. Having got a cat and two kittens he made a crib for them in the granary, and had a carpenter cut circular holes in every door on the premises. The result was that in a short time his place was perfectly clear of rats. For several months past not a rat has been seen, the cats having now increased to seven or eight.



SIDE-HILL BARN.

EDS. CULT. & Co. GENT.—Having during the summer of 1858, built a barn exclusively for the purpose of storing hay and stabling stock, and it having answered the purpose remarkably well, I send you such a description as I am able to make, and ask you to make such use of it as you please.

The barn is 40 feet long by 26 wide, with a basement 8 feet high; posts 20 feet above the basement; the roof steep, which gives more room for hay, is more durable and stronger if left without purlin support; two middle cross works, which make the girts 13 feet. It is situated on a somewhat steep side-hill, facing the south-east; the base-

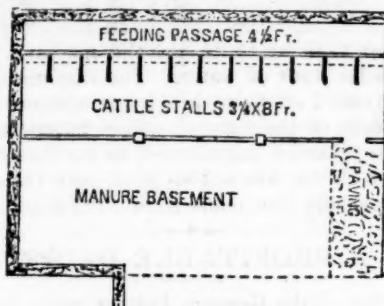
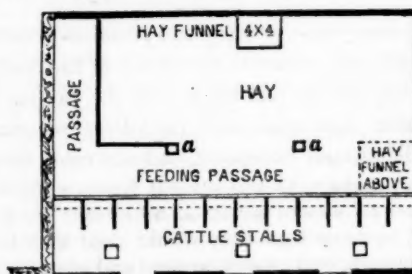


Fig. 2—BASEMENT.

ment wall on the north side, and the west part of the south side to the west middle cross work 8 feet high. The wall at the west end is 15 feet high, the basement part of which is built *very strong* of heavy stone, so that the upper part of it (7 feet high,) which is faced one foot back or west of the basement wall, (for a cross sill to rest upon,) may rest *firm*, and *never be moved*.

The post which is in the east middle cross work, south side, is supported by bridge braces, (shown in the view by the dotted lines,) with bolt at bottom to hold up the sill, which gives free access to the manure which is kept in the south part of the basement; in the north half is a row of stanchion stables for 12 cattle, facing the north, towards a foddering pass wide enough to fodder the cattle when in the stable. One row of cattle are kept over the manure basement facing the north, which, with a foddering pass, occupies 13 feet, or half the width.

Fig. 3—SECOND STORY—*a*, posts supporting hay floor over stable, passage, &c.

The earth is filled in and thoroughly packed up to the wall at the west end, and graded to drive the loaded teams with the hay, to be pitched into the barn through ample sized doors of different height; much of the hay is thus pitched down into the barn, and it is certainly "put into place" with comparatively little labor. The barn is filled with hay, excepting two funnels through which to pitch the hay down to the two foddering passes; and by allowing a reasonable time to settle, will hold 35 tons of hay. Our

cattle are three year old steers, for fattening the following season when four years old. I think there are very few barns which contain so much practically valuable room under the same proportion of roof, or expense of building, and repairs for the next 100 years. The barn is built thoroughly but plainly, and I think at a cost of \$400. As this plan is essentially different from any I have ever seen, and thinking it might suggest some thoughts of value "to whom it may concern," I place it at your disposal. Wishing you and your co-laborers success in your efforts to dignify labor and improve the homes and homesteads of our countrymen, I am, S. J. AVERILL. *New Preston, Ct.*

We have drawn a perspective view and plans as nearly correct as we were able to understand the rough sketches furnished us. If we have made any material error, our correspondent will please make the necessary corrections.

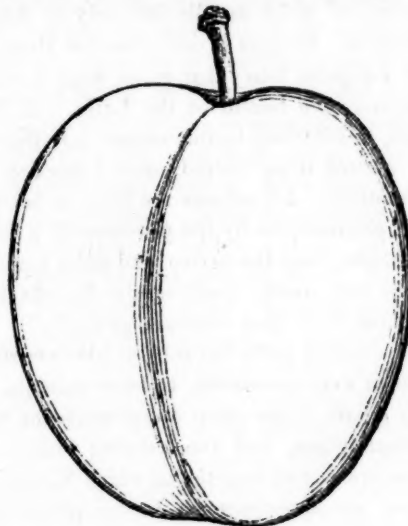
NEW PLUM FROM NORTH CAROLINA.

L. TUCKER & SON—By this day's express we forward to you three seedling plums of this section of the country, from the extensive nurseries of Westbrook & Co., in our immediate vicinity. Will you please look at and examine them, and if you think worth while please notice them, as the variety is certainly new, and they are now propagating—honestly believing that this variety is superior almost to any other, both in regard to taste and size. They call them the Blum plum.

JAMES SLOAN.

Greensboro, N. C.

The plums when received were partly decayed, but enough was left to show their excellent quality. The outline, which we have made, shows the size and form. In



BLUM PLUM.

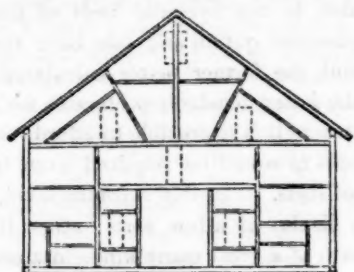
color and shape this plum has considerable resemblance to *Nelson's Victory*, to which it appears to be allied. The following is a description: Size full medium or rather large, oval, color dull orange, with numerous small brown dots, suture distinct, stem short, cavity narrow; flesh yellowish brown, fine grained, very juicy, quality "very good."

We suppose it to be mature in North Carolina about the middle of 7th month, July—it would doubtless be some weeks later here. The variety is certainly worthy of further attention.

RENOVATING OLD APPLE TREES.—"Dig about it and dung it," says a brief writer in the *Genesee Farmer*, was the scriptural way of renewing barren trees. Success attends the same method now. Dig "about," certainly as far as the branches extend, but "do not dig too deep, or injure the roots unnecessarily. Stirring the surface soil frequently, is what they want. Try that, and you will be amazed at the renovation you work in old apple trees."

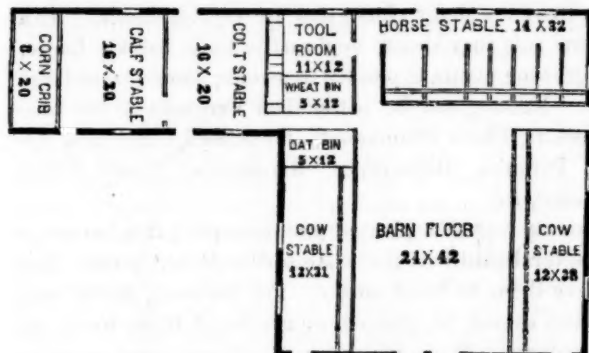
[For the Country Gentleman and Cultivator.]
PLAN OF A BARN.

On the accompanying sheet I send you a rough sketch of my barn, and if you consider it worthy a place, you are at liberty to use it. I have studied at it for several years, and finally settled upon the present plan. As it is impossible to build a *model* barn, I have arranged this to suit my



Elevation of Frame—dotted lines Windows.

own farm. Size, 56 by 48 ft. The L. 20 by 40. Length of posts on main barn, 18 ft. Pitch of roof, 1-3. Posts in the L., 12 feet. Projection of rafters, two feet. Rafters framed into perline plate, making two sets. King rafters over each, bent four by six inches. King part 16 10-12 feet from centre of ridge, framed into the king rafters and into the upper beams, as you will see in the cut. In the whole building there are 132 braces and 600 pins. Space over the cows, seven feet in the clear; over the main floor and horse stable, nine feet. Thus we have



room for twenty-two cows, nine horses, tool room, and two grain-bins, and a large space for carriages, and room above for 35 or 40 tons of hay.

The colt and calf stable and corn-crib are convenient. Under the main floor is a large cellar to receive roots, entered by a trap door. From this cellar the roots are easily thrown upon the floor and cut as required, and fed very handily. In this barn I can feed and milk my cows, and feed horses, colts and young cattle without going out of doors. I need no cellar to receive manure, as I make a practice of hauling it on to my fields early in the spring in its fresh state. In the center of the ridge is a cupola four by five feet, and eight feet high, with blinds which serves as a ventilator. From the top of this the lightning rod extends ten feet, and then down to the ground. Outside boards of barn planed and battened. Bottom of corn-crib two by four inch plank, one inch apart. In the inside, boarded on to the girts by leaving one inch space. Upon the outside, four inch boards planed and placed three-quarters of an inch apart; thus the outside boards are saved from the pressure within. All to be painted. A cistern to be built between the L. and main barn. Cost of materials and carpenter, \$1,200; hauling of materials and boarding of hands not counted. C. G. TAYLOR.

Rock Island Co., Ill.

A Troublesome Kentucky Weed

EDS. CO. GENT.—Enclosed find samples of a weed which gives us some annoyance here. Can you tell me its name? T. R. Kentucky.

THE ONE SEEDED STAR CUCUMBER (*Sicyos angulatus*.) Below we give an engraving of this weed from Darlington's "Weeds and Useful Plants." He says of it:



"This cucumber-like vine has found its way into gardens where it is a nuisance rather difficult to get rid of. It is, according to Dr. Short, a great pest in the rich corn-fields of Kentucky, 'springing up' after the crop 'is laid by,' and so extending from one corn-stalk to another as to make it extremely difficult to pass through the field.' The Balsam Apple (*Momordica Balsamina*, L.) the red fruit of which, made into a tincture, was formerly used as an application to wounds, belongs to this section, and is sometimes cultivated in gardens."

[For the Country Gentleman and Cultivator.]
CUTTING CORN STALKS.

EDS. CO. GENT.—I send you for publication, if you please, some recollections of an accidental experiment in topping corn. The result is different, I think, from other and better experiments of the same kind.

In 1856 I had a piece of corn containing one and a half acres—soil and culture all alike. After the first of September I commenced cutting from one to three rows daily, until the piece was two-thirds cut; the remaining third ripened with the tops on. At harvest I commenced harvesting at the side that I did to cut stalks; four rows made a load; each load was husked and measured separately. There was an increase in quantity of corn every load as far as the stalks had been cut. The first four rows yielded at the rate of eighty bushel baskets of ears per acre; the first half acre at the rate of one hundred and two baskets per acre; the remaining acre one hundred and nineteen baskets. The stalks had become so dry that the cattle would not eat them readily when I stopped cutting. There was plenty of ripening weather that fall and no high winds. EDWARD WILLIS. Kingston, Mass.

Another Short-Horn Sale at Good Prices.

Mr. BOLDEN, whose Short-Horn herd ranks among the first in Great Britain, recently finding himself somewhat overstocked, determined upon a sale, and, in order that he might not rest under the imputation of weeding out the least meritorious of his animals for the occasion, offered one family or tribe, the "Waterloo" cows and bulls, which with a few others, constituted a catalogue of 29 head. This tribe, remarks the *Mark Lane Express*, "was derived from the Kirkleavington herd; and, therefore, chiefly crossed as it has been in the case under our notice with the bulls of pure 'Bates' blood, may be reckoned as belonging to one of the most valuable families of the Short-Horn breed. That they were so held by the bidders at the Springfield Hall sale on Thursday last, is shown by the following result:" The average for the 29 animals sold was about \$435 per head, (exactly, £87 17s. 6d.) The highest price obtained was for "Waterloo 20th," in calf to 3d Grand Duke, which brought 165 guineas, say \$825, now 3½ years old.

Our contemporary, above quoted, congratulates the English public upon one

"circumstance of this sale which challenges our gratification and sincere satisfaction; and this is, that all the lots appear destined, for the present at least, to remain in the country. There were no foreigners nor Americans to dispute with English breeders the possession of these valuable animals.

"It was a remarkable feature of this sale, that whenever a pure Bates was offered, the bids were as brisk and spirited as the most fastidious auctioneer could wish; whereas, when other blood was introduced into the ring, the offers were comparatively languid, and the auctioneer's exertions correspondingly great. Even the influence of the 3d Grand Duke's bulling or paternity told with a manifest and unmistakable weight on the biddings; and, notwithstanding the individual merits of 'Prince Imperial,' and the acknowledged excellence and well-deserved celebrity of the Warlabby herd, it must be admitted that it was the Kirkleavington blood that commanded the greatest eagerness on the part of the buyers, and, consequently, the highest prices."

In the notice of Mr. BOLDEN'S SALE above, we have quoted the *Mark Lane Express* as authority for the statement that "whenever a pure Bates was offered" the demand was the brisker and the bidding higher for the presence of the Kirkleavington blood. The *Irish Farmers' Gazette* is now at hand with the details of the Kingsfort Sale, July 18—the prices at which are referred to as affording conclusive testimony exactly in a different direction. We had the pleasure of visiting last summer Mr. CHALONER'S herd at Kingsfort, and found it well calculated, as the *Gazette* remarks, to "sustain the long established reputation which Mr. Chaloner has earned as a "Short-Horn breeder." Our contemporary continues as follows:

Another point was also very clearly brought out, to wit, the great value set upon the "Booth strain" in this country. So much so was this the case, that throughout the entire catalogue the greater the number of "Booth" crosses which the pedigrees exhibited, so much the more was the respective values of the animals enhanced.

In fact "none of the cattle sold at Mr. Bolden's Sale, reached the prices obtained at Kingsfort," but the average was not materially different. Forty-one cows and heifers were disposed of, averaging £86 3s. (say \$430) per head, and eight bulls, averaging £87 13s.—total, 49 head. At Mr. Bolden's Sale, there were only 29 head sold, at an average of about \$435, while the average of an equal number at Mr. Chaloner's, selecting the 29 highest, is about \$565. "Miss Warlabby," near eight years old, went up to £372 15s. (say \$1,860) and "Sheet Anchor," a bull-calf of 15 months, was sold for £346 10s. (say \$1,730.)

IMPORTANT INVENTION!—A new machine for milking cows, "to be worked by the motion of the cows tail!" has been imagined by a farmer in Mass. *Artificial flies* will furnish motive power when the fly season is over. So says a writer in the *New-England Farmer*, who seems disposed to be jocose on the "march of invention" in applying mechanics to agricultural machinery.

Methods of Laying Out the Flower Garden.

A few years since the only method of planting the flower borders was that of setting each plant by itself, and in most cases contrasting them both in color and habit as strongly as possible. Now the fashion is to plant a single variety in beds of small size cut out of the grass in patches in the borders, or in case of a geometrical arrangement of the flower garden, in the irregular beds of that system. Both the promiscuous system and this have their advantages. We think the former better calculated for small gardens, and the latter decidedly preferable for large ones. In the small gardens it is impossible to afford room enough for so many beds as would be required even in a moderate selection of sorts. It is often recommended, we know, to make a fine display of a few sorts rather than to attempt the growth of a great many kinds in a small space; but every true lover of flowers *must* have all his old favorites, and as many new ones as he can possibly find a little bit of room for. A large garden tastefully laid out with beds cut out of the turf, and each one appropriated to a particular variety and color, is very ornamental indeed, and is much more showy and conspicuous, and at the same time is more methodical, needs less care, and looks less cluttered up than if laid out in the other manner.

Nothing can be more brilliant than a bed of scarlet Geraniums, Defiance Verbenas, or any other high colored flower; nothing more delightful than the fragrance of a mass of Heliotrope, Mignonette or Pinks. For this purpose there are many plants that are very desirable. As a general rule they should be dwarf in their habit. Large, tall growing plants, if planted in masses, should be in large beds. Nothing can be better than Verbenas of the various colors, Phlox Drummondii, Portulacca, Candytuft, Asters, Petunias, Heliotropes, Mignonette, Pinks, Sweet Williams, &c.

Even in a garden planted promiscuously, it is better to put several plants of the same sort together, rather than to have them to stand singly. For instance, Asters and Balsams should be planted in groups of three to six or eight plants. Those which grow tall and bushy, such as Roses, Salvias, &c., may be planted singly. All herbaceous plants should be in stools of not less than a foot in diameter in the promiscuous borders, or in smaller stools in beds, a foot or two feet apart, according to the sort.

A mixed system of arrangement may be adopted with good effect in large gardens enclosed with walls or close fences. Cover the wall or fence with climbing plants, as Honeysuckle, Virginia Creeper, Clematis, Trumpet Vine, &c., and make a border around the whole garden three to six feet in width, for herbaceous plants, dahlias, hollyhocks, &c. Then in the turf cut out small circular or elliptical beds, for planting with single varieties of showy annuals or bedding-out plants.

G. B. H.

SHOEING HENS.

We observe a recent notice in some paper, of the practice of making woolen shoes (or rather boots) to prevent hens from scratching. A flock of fifty fowls, like our own, would require considerable labor in the manufacture of a hundred woolen boots, which might be worn through in a short time and need renewing. It is much better we think, to procure a breed that will not scratch. There is another point of importance—that is to keep the animals well fed, during the season when scratching is most feared. We keep from thirty to fifty of the White Shanghai,—a very quiet, well behaved, and profitable fowl,—and adopt the most economical mode, namely, regular feeding with grain,—and although there is no barrier between their ordinary range and the kitchen garden, they do not scratch yearly enough to do twenty-five cents damage.

SOUTH-DOWN SHEEP.

As the importance of devoting more attention to SHEEP begins to grow in appreciation with American farmers, they become willing to pay higher Prices for better Animals, and to select more judiciously the kind of Animal suited to their wants. Among the different Breeds which have been imported and thoroughly tested here, the SOUTH-DOWN occupies a prominent and advancing position in Public favor. Especially where an accessible Market is afforded and pasturage is good—for example along the Connecticut Valley, as was recently noted in the COUNTRY GENTLEMAN—and, indeed, wherever winter feeding can be made to increase the Profits and add to the Manurial resources of the Farmer, the South-Down must be regarded a prominent candidate for his attention, and a cross of it upon common ewes, or upon those previously possessing a strain of almost any other improved sort, can scarcely fail to add enough in Money value to the Lambs of a single season or two, to remunerate him for the additional Expense of obtaining a Ram of pure blood.

JONAS WEBB, of whose Letting in 1859 we gave an account from personal observation, has just had another of these interesting anniversaries, as previously advertised in our columns. Again it is an American who has overtopped all English competition, and by the bids of Mr. J. C. TAYLOR of Holmdel, N. J., (through an agent,) the Ram which received the highest award of those exhibited by Mr. W. at the Royal Society's Warwick Show, and which was run up on this occasion very nearly to *six times the average price* per head of the whole number let—is coming over to add its *prestige* and influence to a flock which already stands well in the character of the blood it includes. With Messrs. THORNE, ALEXANDER, SHELDON and others, Mr. Taylor is doing much to place within the reach of the Farmers of the United States just that kind of improvement of which they are now perhaps most in need.

The Ram in question was only surpassed at the Warwick Show (in the awards of the Judges), by one exhibited from the flock of the Duke of Richmond. There is an impression that it is very well that Webb's South-Downs should get a second place now and then, for he always more than makes up for the loss just as soon as an opportunity offers—at least such has been the case frequently heretofore, and now we find that at Canterbury he is quite recovering his old way of sweeping all he wants, for the telegraphic dispatch from that Exhibition to the Mark Lane Express, just received, reads thus:—"Southdown Rams: Jonas Webb, all the prizes for both classes."

As Mr. Taylor is thus fresh, in a certain sense, from the pick of the Babraham flock, its successes are particularly a matter of interest here, nor can we pass by without a word the fate of the other rams offered at the recent Letting. There were 60 let, which is several more than were disposed of last year, at an average a little lower than that of 1859, but just about as much higher than the average of '58—namely, £23 0s. 8d. now, against 54 head last year at £25 9s. 10d. per head, and 61 the previous season at £20 19s. 3d. The highest price for any animal, that paid by Mr. TAYLOR*—is 126 guineas, say \$630; the next highest 70 gs., and there are only three more which exceeded 50 gs. each. Among other familiar names on the list of successful bidders, we notice that of Mr. Fulcher for Lord Sondes. There were also several French and German gentlemen among the competitors.

[For the Country Gentleman and Cultivator.]

HOW TO DESTROY IRON WEED.

MESSRS. EDITORS—I observe in a late no. of the Co. GENT., an inquiry as to the best method of exterminating the iron weed. Col. G. W. HAMPTON of this county, bought a farm on which was an excellent piece of meadow ground, which had become so thoroughly over-run with iron weed before he bought; that his predecessor had in the fall previous cut down and hauled them out by the wagon load, and deposited them on the poor points.

When Col. Hampton got possession of the place, he employed a man when the weeds were about knee high,

to go over the meadow with a sharp scythe and clip them off about mid-leg high, after which they would bleed profusely, but would not die. At mowing time they were cut off close to the ground. Under this course of treatment, he informed me that in three years there was scarcely one to be seen in his meadow.

In this course of treatment Col. H. is fully sustained by John Woodfin, Sen., Esq., who thinks the bleeding so copiously and so frequently, gradually enfeebles this pest of the farm until finally death ensues.

REAGAN.

Rims Creek, N. C., July 23.

[For the Country Gentleman and Cultivator.]

RECIPE FOR ELDERBERRY WINE.

EDS. CO. GENT.—In no. 3 of the present volume of the Co. GENT., "A. B. R." inquires for a recipe for making Elderberry Wine. My mother says the following is *first-rate*:

The quantity of fruit required, is one gallon of ripe elderberries for every two gallons of wine. For ten gallons wine take five gallons berries, boil them in five or six gallons of water, then strain the liquor, and whatever the liquor proves short of ten gallons, make up as follows: Add water to the pulp, stir it about and strain to the rest. Add thirty pounds sugar and two or three ounces hops. Then take three-quarters of a pound of ginger-root bruised, five ounces cloves, one of cinnamon, and put them together in a bag and tie loosely. Put the bag with its contents into the previous mixture, and boil two hours; when quite cool, ferment with yeast as you do beer. In two or three days draw the liquor off into a cask, suspend the bag of spices by a string not long enough to reach the bottom; paste over stiff brown paper. It will be fit for use in two months. F. A. R. Maine, Ill.

[For the Country Gentleman and Cultivator.]

TYMPANITIS---HOVEN IN CATTLE.

IN ANSWER TO W. A., IOWA CITY.—This disease is characterised by distention of the rumen with gas—is a very common affection among cattle, and results from irregular feeding, wet clover, vetches, or in the way W. A. has indicated. A cure will usually be accomplished by giving to the animal twice, two ounces of oil of turpentine, with a pint of linseed oil, and an ounce or two of ginger.

If the distention increases and the beast becomes stupid, introduce the trochar and canula into the side. Choose the most salient point, or equi-distant from the haunch, the lumbar vertebra and the last rib. The trochar is to be withdrawn and the canula is to remain until the swelling entirely falls. Where a trochar cannot be had, the operation may be easily performed with a well sharpened table knife, which is preferable to a pen-knife; the animal to be fed on soft food for a number of days. A proper trochar to use in such cases, is one-half longer and the thickness in proportion, to the one usually employed in tapping the human subject.

R. McCLURE, V. S.

Philadelphia, July 25.

[For the Country Gentleman and Cultivator.]

SWEET PICKLED TOMATOES.

One peck of green tomatoes sliced—six large onions sliced—strew a teacupful of salt over them; let them remain over night—drain off in the morning—then take two quarts of water and one of vinegar—boil them in it 15 or 20 minutes; after boiling put them in a sieve to drain—then take 4 quarts of vinegar, 2 pounds of brown sugar, half pound white mustard seed, 2 tablespoonfuls of ground alspice, same of cloves, cinnamon, ginger and mustard, and one teaspoonful of cayenne pepper—put all in a kettle and cook 15 minutes *slowly*, and you will pronounce them capital I am sure. M. H. K.

The Winnebago Co. (Wisc.) Ag. Society have their head-quarters at Osh Kosh, where their Sixth Show will be held Sept. 19, 20—President, M. C. Bushnell Secretary, J. H. Osborn.

AGRICULTURAL AND OTHER EXHIBITIONS THE PRESENT SEASON.

NATIONAL.

United States... Cincinnati, Sept 12, 20.
Am. Pomological... Philadelphia, Sept 11, 14.
Amer. Institute... New-York, opens Sept 27.
Horse Exhibition... Springfield, Mass, Sept 4, 7.

STATE.

Alabama... Montgomery, Oct 29, Nov 2.
California... Sacramento, Sept 19, 20.
Canada, Lower... Quebec, Aug 18, 22.
Canada, Upper... Hamilton, Sept.
Connecticut... No exhibition on account of Cattle disease.
Georgia... Atlanta, Oct 23, 26.
Georgia, (Planters)... Macon, Dec 3, 29.
Georgia, Lower... Savannah, Nov 22.
Illinois... Jacksonville, Sept 10, 15.
Indiana... Indianapolis, Oct 15, 20.
Iowa... Iowa City, Oct 2, 5.
Kentucky... Bowling Green, Sept 18, 22.
Kentucky Central... Danville, Sept 4, 7.
Kentucky, N. Eastern... Ashland, Sept 18, 20.
Maine... Portland, Sept 25, 28.
Maine Horse Show... Augusta, Sept 18, 21.
Maryland... Baltimore, Oct 30, Nov 3.
Michigan... Detroit, Oct 2, 5.
Minnesota... Fort Snelling, Sept 27, 29.
Mississippi... Holly Springs, Oct 16, 20.
Nebraska... Omaha, Sept 19, 21.
New-Hampshire... Manchester, Oct 3, 6.
New-Jersey... Elizabeth, Sept 4, 7.
New-York... Elmira, Oct 2, 5.
North Carolina... Raleigh, Oct 16, 19.
Ohio... Dayton, Sept 25, 28.
Oregon... Oct 2.
Pennsylvania... Wilkesbarre, Sept 24, 27.
St. Louis Ag. and Mechanical Association, St. Louis, Sept 24, 30.
South Carolina... Columbia, Nov 13, 16.
Tennessee... Nashville, Oct 10, 15.
Tennessee, Mid. Div... Franklin, Sept 24, 28.
Vermont... Burlington, Sept 11, 14.
Virginia... Richmond, Oct 22, 28.
Wisconsin... Madison, Sept 24, 29.

COUNTY AND TOWN—MAINE.

Androscoggin... Lewiston, Oct 2, 5.
Franklin... Farmington, Oct 3, 5.
Hancock... Ellsworth, Sept 26, 27.
Kennebec... Readfield, Oct 9, 11.
North Aroostook... Presque Isle, Oct 3, 4.
Piscataquis... Dover, Oct 3, 4.
Sagadahoc... Topsham, Oct 11.
Union... East Sumner, Oct 16, 17.
West Washington... Jonesboro, Sept 27, 28.
Waldo... Belfast, Oct 10, 12.

NEW-HAMPSHIRE.

Belknap... Sept. 26, 27.
Carroll... Ossipee, Sept 19, 20.
Cheshire... Keene, Sept 25, 26.
Conn. Valley... Charlestown, Oct 2, 5.
Grafton... Littleton, Sept. 19, 20.
Hillsboro' (North)... Weare, Sept. 20, 21.
Merrimack... Concord, Sept. 26, 28.
Merrimack River... Nashua, Oct. 10, 11.
Rockingham... Portsmouth, Sept 19, 20.

VERMONT.

Addison... Middlebury, Sept 5, 7.
Caledonia... St. Johnsbury, Sept 26, 28.
Rutland... Rutland, Sept 6, 7.
Windham... Brooklyn, Sept 12, 14.

MASSACHUSETTS.

Barnstable... Barnstable, Oct 9.
Bristol... Taunton, Oct 2.
Bristol Central... Myricks, Sept 26, 27.
Berkshire... Pittsfield, Oct 3, 5.
Essex... Danvers, Sept 25.
Franklin... Greenfield, Sept 27.
Housatonic... Great Barrington, Sept 26.
Hampshire, Franklin and Hampden... Northampton, Oct 4.
Hampshire... Amherst, Oct 11.
Hampden... Springfield, Sept 20.
Hampden East... Palmer, Sept 18.
Lowhegan... Mason Village, Sept 25.
Middlesex... Concord, Sept 20.
Middlesex South... Framingham, Sept 18.
Middlesex North... Lowell, Sept 13.
Martha's Vineyard... West Tisbury, Oct 16.
Nantucket... Nantucket, Oct 11.
Norfolk... Dedham, Sept 27.
Plymouth... Bridgewater, Oct 4.
Worcester... Worcester, Oct 2.
Worcester West... Barre, Sept 27.
Worcester North... Fitchburg, Sept 25.
Worcester South... Sturbridge, Oct 4.

CONNECTICUT.

Middlesex... Middletown, Oct. 3, 5.
Windham... Brooklyn, Sept 12, 14.
Wilton, Town, Sept 4, 5.

NEW-YORK.

Albany... Albany, Sept 18, 22.
Afton... Chenango Co., Sept 12, 13.
Broome... Lisle Village, Sept 11, 13.
Busti Union... Busti, Sept 6, 7.
Brookfield... Madison Co., Sept 26, 27.
Cattaraugus... Little Valley, Sept 25, 27.
Cayuga... Auburn, Sept 12, 14.
Chautauqua... Jamestown, Sept 11, 13.
Chautauqua Farmers' and Mechanics... Fredonia, Sept 26, 28.
Chenango... Coventry, Oct 3, 4.
Chemung...
Clinton... Plattsburgh, Sept 10, 11.
Cortland... Virgil, Sept 20, 22.

Clymer... Clymer, Sept 5, 6.
Columbia Ag. and Hort... Hudson, Oct 2, 4.
Columbus Town... Oct 2, 4.
Delaware... Hobart, Sept 26, 27.
Dutchess... Wash. Hollow, Essex... Essex Village.
Franklin... Malone, Sept 11.
Genesee Valley... Nunda, Sept 13, 15.
Genesee... Batavia, Sept 18, 19.
Gouverneur... Gouverneur, Sept 13, 14.
Herkimer... Little Falls.
Horse Show... Buffalo, Aug 28, 31.
Livingston... Genesee, Sept 26, 28.
Lewis... Turin, Sept 25, 27.
Madison... Brookfield, Sept 26, 27.
Monroe... Rochester, Sept 26, 28.
Niagara... Lockport, Sept 27, 29.
Oneida... Utica, Sept 25, 26.
Oswego... Mexico, Sept 18, 20.
Otsego... Cooperstown, Sept 26, 27.
Ontario... Canandaigua, Sept 26, 28.
Onondaga... Syracuse, Sept 26, 28.
Oxford Town... Oct. 2, 4.
Otselic Town... Sept 13, 14.
Putnam... Brewster, Sept 25, 27.
Queens... Jamaica, Sept 13.
Rensselaer... Lansingburgh, Sept 19, 29.
Ridgeway and Shelby... Medina, Sept 12, 14.
Rushville Union... Rushville, Sept 20, 21.
Sangerfield and Marshall... Waterville, Oct 3, 4.
St. Lawrence International... Ogdensburg, Sept 26, 29.

St. Lawrence... Canton, Sept 26, 28.
Susquehanna Valley... Unadilla, Sept 25, 26.
Seneca... Waterloo, Sept 26, 28.
Skaneateles... Skaneateles, Sept. 25.
Saratoga... Saratoga Springs, Sept 4, 7.
Sherburne Town... Sept. 26, 28.
Smithville Town... Sept. 6, 7.
Tompkins... Ithaca, Sept 5, 7.
Tonawanda Valley... Attica, Sept 26, 27.
Ulster... Kingston, Sept 26, 28.
Union, Monroe Co... Brockport, Oct 2, 3.
Union, Erie Co... Springville.
Union, Jefferson Co... Adams, Sept 12, 13.
Union, So. Cayuga... Sherwood's Corners, Sept 11, 12.
Union, Tomp. Co... Trumansburg, Sept 11, 13.
Westchester... Mt. Kisco, Sept 25, 27.
Wayne... Clyde, Sept 12.
Wayne, Palmyra Union... Palmyra, Oct 2, 4.
Yates... Penn Yan, Sept 26, 28.

NEW-JERSEY.

Somerset... Somerville, Sept 11, 13.
Sussex... Newton, Oct 2, 5.
Warren... Belvidere, Sept 11, 14.

PENNSYLVANIA.

Allegheny... Pittsburgh, Sept 4, 7.
Bucks... Newtown, Sept 26, 27.
Berks... Reading, Sept 25, 27.
Chester... Westchester.
Crawford... Meadville, Sept 18, 20.
Highland... Johnstown, Sept 27, 29.
Lawrence... Newcaste, Oct 2, 4.
Montgomery... Springtown, Oct 2, 4.
Philadelphia... Powelton, Sept 25, 28.
Wattsburg... Wattsburg, Sept. 26, 27.

DELAWARE.

Newcastle... Wilmington.
Frederick... Frederick, Oct 16, 19.

MARYLAND.

Greenbriar... Frederick, Aug 31.

VIRGINIA.

Wheeling Island, Sept 11, 13.

GEORGIA.

Hancock... Sparta, Oct 16, 20.

NORTH CAROLINA.

Cumberland... Franklin, Nov.
Sampson... Clinton.
Wayne... Goldsboro.

SOUTH CAROLINA.

Vine-Growers' Convention... Aiken, Aug. 21.

KENTUCKY.

Bourbon... Paris, Sept 4, 7.
Clark... Winchester, Aug 30, Sept 1.
Harrison... Cynthia, Sept 18, 21.
Warren... Bowling Green, Sept 18, 20.

TENNESSEE.

Bedford... Shelbyville, Sept 18, 22.
Giles... Pulaski, Oct 9, 13.
Gibson... Trenton, Oct 10, 12.
Maury... Columbia, Oct 1, 6.
Marshall... Lewisburg, Sept 11, 14.
Putnam... Cookeville, Oct 1, 4.
Perry... Oct 16, 20.
Shelby... Memphis, Oct 9, 15.
Sumner... Gallatin, Sept 17, 22.
Smith... Rome, Sept 26, 29.
Warren... McMinnville, Oct 9, 11.

MISSOURI.

Cole... Jefferson City, Oct 1, 8.
Clay... Liberty, Oct 2, 7.
Platte... Platte City, Sept 25, 30.
Newark... Newark, Sept 3, 7.
Lafayette... Lexington, Oct 2, 6.
Central District... Boonville, Oct 1, 5.
S. E. District... Cape Girardeau, Oct 11, 13.
Howard... Fayette, Aug 29, Sept 1.
Osage... Linn, Oct 4, 5.
Jackson... Independence, Sept 4, 9.
Benton... Sept 25, 27.
Saline... Miami, Sept 4, 8.

Bates... Oct 17, 20.
Cass... Pleasant Hill, Sept 26, 29.
Clinton... Plattsburgh, Sept 11, 14.
Gasconade... Hermann, Sept 5, 6.
Franklin... Union, Oct 13, 15.
Marion... Palmyra, Sept 17, 22.

MISSISSIPPI.

Attala... Liberty Chapel, Nov 1, 3.
Choctaw... Bankston, Nov 9, 10.
Chickasaw... Okolona, Oct 23, 26.
De Soto... Hernando, Oct 2, 6.
Grenada... Grenada, Oct 30, Nov 2.
Lowndes... Columbus, Oct 9, 12.
Marshall... Holly Springs, Oct 2, 5.
Monroe... Aberdeen, Oct 16, 19.
Oktibbeha... Starkville, Oct 23, 25.
Pontotoc... Pontotoc, Oct 30, Nov 4.
Scott... Hillsboro, Nov 7, 8.
Warren... Vicksburg, Oct 18.
Jefferson... Rodney, Nov 6, 9.
Leake... no Exhibition this year.
Franklin... Meadville, Oct 11, 13.
Claiborne... Port Gibson, Nov 13, 16.
Panola... Panola, Nov 6, 8.
Pike... Summit, Nov 7, 9.

OHIO.

Athens... Athens, Sept 25, 27.
Adams... West Union, Sept 25, 28.
Ashtabula... Ashtabula, Sept 26, 28.
Ashland... Ashland, Oct 10, 12.
Alliance... Alliance, Sept 20, 22.
Belleville... Richland Co., Sept 24, 26.
Brown, (Independent)... Ripley, Sept 25, 28.
Brown... Georgetown, Sept 4, 7.
Butler... Hamilton, Oct 2, 5.
Belmont... St. Clairsville, Sept 25, 28.
Belmont... Belmont Co., Sept 18, 20.
Conneaut... Ashtabula Co., Sept 27, 28.
Carroll... Carrollton, Oct 2, 4.
Clermont... Olive Branch, Sept 18, 20.
Clermont... Rantam, Sept 11, 14.
Crawford... Bucyrus, Oct 3, 5.
Clarke... Springfield, Oct 2, 5.
Champaign... Urbana, Oct 9, 12.
Clinton... Wilmington, Sept 18, 20.
Columbiana... New-Lisbon, Sept 26, 28.
Cuyahoga... Cleveland, Oct 2, 5.
Coshocton... Coshocton, Oct 10, 11.
Darke... Greenville, Oct 2, 5.
Defiance... Defiance, Sept 19, 21.
Delaware... Delaware, Sept 19, 21.
Franklin... Madison, Sept 18, 20.
Fairfield... Lancaster, Oct 10, 12.
Fayette... Washington, Sept 5, 7.
Farmers' and Mechanics' Association... Ashtabula, Sept 26, 28.

Greene... Xenia, Sept 18, 21.
Geauga... Burton, Sept 25, 27.
Geauga (free)... Claridon, Oct 3, 5.
Gallia... Gallipolis, Sept 11, 12.
Guernsey... Cambridge, Oct 27, 28.
Hocking... Logan, Oct 3, 5.
Harrison... Cadiz, Oct 3, 5.
Huron... Norwalk, Oct 3, 5.
Highland... Hillsboro, Oct 2, 5.
Horse-Breeders' Assn... Cleveland, Sept 5, 7.
Hancock... Findley, Sept 27, 29.
Jackson... Jackson, Sept 26, 28.
Knox... Mt. Vernon, Sept 26, 28.
Lake... Painesville, Oct 3, 5.
Logan... Bellefontaine, Oct 4, 7.
Lawrence... Ironton, Oct 3, 5.
Loraine... Elyria, Oct 3, 5.
Licking... Newark, Oct 3, 5.
Lucas... Toledo, Oct 3, 5.
Mahoning... Canfield, Oct 2, 4.
Medina... Medina, Sept 18, 20.
Montgomery... Dayton, Sept 25, 28.
Morgan... McConnellsville, Oct 3, 5.
Miami... Piqua, Sept 18, 21.
Miami... Troy, Sept 21, 24.
Morrow... Mt. Gilead, Oct 10, 12.
Madison... Franklin Co., Sept 18, 20.
Marion... Marion, Oct 3, 5.
Madison... London, Sept 19, 21.
Muskingum... Zanesville, Sept 18, 22.
Marlboro... Stark Co., Sept 29.
Orwell... Ashtabula, Oct 1, 3.
Paulding... Junction, Oct 25, 26.
Preble... Eaton, Sept 18, 21.
Portage... Ravenna, Sept 5, 7.
Pickaway... Ciderville, Sept 12, 14.
Putnam... Ottawa, Oct 3, 5.
Philadelphia... Philadelphia, Sept 25, 28.
Plymouth... Richland Co., Sept 26, 28.
Richfield... Summit Co., Sept 26, 28.
Richland... Mansfield, Oct 2, 5.
Ross... Chillicothe, Oct 3, 5.
Seneca... Tiffin, Sept 3, 5.
Summit... Akron, Sept 2, 4.
Scioto... Portsmouth, Sept 12, 14.
Sandusky... Fremont, Oct 2, 4.
Stark... Canton, Oct 4, 6.
Salem... Columbiana Co., Sept 12, 14.
Twinsburg... Twinsburg, Sept 12, 14.
Trumbull... Warren, Sept 11, 14.
Tuscarawas... New Philadelphia, Sept 26, 28.
Union... Marysville, Sept 26, 28.
Union, Greene Co... Jamestown, Aug 29.
Union Society... Cuyahoga Falls, Sept 5, 7.
Vinton... McArthur, Sept 19, 20.
Warren... Lebanon, Sept 12, 14.
Washington... Marietta, Oct 3, 5.
Wayne... Wooster, Oct 3, 5.
Wood... Perryburgh, Oct 2, 3.
Wyandot... Upper Sandusky, Oct 10, 12.

Williams....Bryan, Oct 3, 5.
Wellington....Lorain Co., Oct 10, 12.

MICHIGAN.

Battle Creek, Town, Sept 26, 28.
Berrien....Niles, Sept 26, 28.
Cass....Cassopolis, Sept 5, 7.
Horse Show....Kalamazoo, Sept 11, 14.
Do....Hudson, Sept 19, 21.
Ingham....Mason, Sept 25, 27.
Kalamazoo....Kalamazoo, Sept 25, 27.
Livingston....Howell, Sept 26, 27.
Lenawee....Adrian, Sept 25, 27.
Lapeer....Lapeer, Sept 25, 27.
Macomb....Utica, Sept 26, 28.
Oakland....Pontiac, Oct 10, 12.
St. Joseph....Centerville, Sept 26, 28.
Sanilac....Lexington, Sept 27, 28.
Shiawassee....Corunna, Sept 20, 21.
Van Buren....Paw Paw, Sept 27, 29.
Washtenaw....Ann Arbor, Oct 10, 12.
Wastenaaw and Wayne Union....Ypsilanti, Oct 10, 12.

INDIANA.

Allen....Fort Wayne, Sept 19, 21.
Clark....Charlestown, Sept 12, 14.
Decatur....Greensburg, Sept 18, 23.
Dearborn....Lawrenceburg, Sept 10, 11.
Elkhart Co., Union....Goshen, Fayette....Connersville, Sept 4, 7.
Fulton....Rochester, Oct 12, 13.
Fountain....Attica, Oct 10, 12.
Gibson....Princeton, Oct 9, 12.
Jasper....Rensselaer, Sept 26, 28.
Kosciusko....Warsaw, Oct 3, 5.
Laporte....Laporte, Sept 19, 20.
Lawrence....Bedford, Sept 4.
Miami....Peru, Sept 26, 28.
Monroe....Bloomington, Sept 4, 6.
Morgan....Centerton, Sept 25, 28.
Montgomery....Crawfordsville, Sept 18, 21.
Noble....Albion, Oct 3, 4.
Orange....Livonia, Oct 8, 13.

Putnam....Greencastle, Sept 10, 14.
Park....Montezuma, Oct 3, 5.
Posey....New Harmony, Oct 2, 5.
Ripley....Versailles, Sept 18, 20.
Kush....Kushville, Sept 11, 14.
Sullivan....Carlisle, Sept 26, 28.
Shelby....Shelbyville, Sept 11, 14.
Spencer....Rockport, Oct 10, 11.
Steuben....Angola, Oct 4, 5.
Union....Knightstown, August 23, 31.
Union....Russellville, Sept 3, 8.
Vermillion....Montezuma, Oct 2, 5.
Wells....Bluffton, Oct 2, 3.
Warrick....Boonville, Oct 2, 6.
Whitley....Columbia City, Oct 3, 5.
Washington....Salem, Sept 11, 14.
Union....Goshen, Sept 25, 28.
Union....Bridgeton, Sept 18, 21.

ILLINOIS.

Adams....Quincy, Oct 2, 6.
Carroll....Mt. Carroll, Sept 17, 19.
Champaign....Urbana, Sept 4, 7.
Cass....Virginia, Sept 4, 7.
Dupage....Wheaton, Sept 26, 28.
Hancock....Carthage, Sept 19, 21.
Henry....Cambridge, Oct 3, 5.
Jo Daviess....Galena, Sept 11, 14.
Knox....Knoxville, Sept 25, 29.
Kane....Geneva, Lee....Dixon, Oct 1, 5.
Lake....Liberty, Oct 2, 3.
La Salle....Ottawa, Sept 25, 28.
Livingston....Pontiac, Sept 18, 20.
Monroe....Waterloo, Oct 16, 18.
Macoupin....Carlinville, Oct 2, 5.
Macon....Decatur, Oct 1, 5.
Ogle....Oregon, Sept 25, 28.
Pike....Pittsfield, Oct 2, 4.
Rock Island....Rock Island, Sept 19, 21.
Scott....Winchester, Oct 2, 4.
Tazewell....Tremont, Sept 26, 28.
Woodford....Metamora, Sept 19, 21.

WISCONSIN.

Ag. & Mech. Ass'n, Milwaukee,
Dodge....Juneau,
Iowa....Dodgeville,
Racine....Union Grove, Sept 11, 13.
Winnebago....Oshkosh, Sept 19, 20.
Waupaca....Wayauwega Village, Sept 13, 14.

IOWA.

Appanoose....Centerville, Oct 5, 6.
Bremer....Waverly, Sept 26, 27.
Delaware....Delhi, Sept 25, 27.
Jackson....Andrew, 19, 20.
Marshall....Marietta, Sept 19, 21.
Poweshiek....Montezuma, Sept 22, 23.
Warren....Indianola, Sept 20, 21.

MINNESOTA.

Winona....Winona, Sept 19, 21.

KANSAS.

Breckenridge....Emporia.

CALIFORNIA.

San Joaquin....Stockton, Aug 23.

UPPER CANADA.

North Wellington....Fergus, Oct 9.

LOWER CANADA.

Brome....Knowlton, Sept 18.
Compton....Eaton Corner, Sept 27.
Huntingdon....Huntingdon, Sept 25.
Laprairie....St. Constant, Sept 20.
Levis....Notre Dame de la Victoire, Oct 2.
Maskinonge....River du Loup, Oct 2.
Montcalm....St. Liguori, Oct 3.
Montreal....Montreal, Aug 24, 25.
Ottawa....Aylmer, Sept 27.
Pontiac....Clarendon Center, Oct. 4.
Rinowski....St. Germain, Aug 23.
St. Johns....St. Johns, Sept 27.
Shefford....Waterloo, Sept 19.
Stanstead....Magog, Sept 15.

Wheat, Oats, &c., in New-Hampshire.

While I was at New-Haven last February, Mr. WELLS of that place, presented me with about an ounce of Alfalfa or Lucern seed, and sometime subsequent Mr. GOODALE, Secretary of the State Ag. Society of Maine, forwarded to me about the same quantity of Alsike or Sweedish clover seed. These seeds were sown on the 20th of last April, on one corner of a field, with the English Potato Oat. After the oats were harrowed in, the Lucern and Alsike clover were sown. The balance of the field, just half an acre, was sown with timothy, and northern clover seed in the hull; then the ground well rolled. The result of the whole matter is, I have got a splendid piece of oats, the tallest of which are plump seven feet high; also a capital catch of timothy and clover. Some of the Alsike clover is headed out, being 2½ feet high, and the same with the Lucern, although shaded by these tall oats. Up to yesterday (Aug. 13th), with the exception of two or three square rods, the oats over the whole piece stood as straight as cane poles; but a heavy shower last evening, accompanied with a strong south wind, has prostrated that portion of the field where the oats were the heaviest, say six feet and over in height; but as they are about fit to harvest, they will not be greatly injured, if I can secure them within a reasonable time.

I have just received the "Rural New Yorker" of Aug. 11, in which the editor says "the oat crop is very heavy hereabouts," and adds, "among the samples presented us of late, some heads of the Black Main variety, grown on the farm of Judge Wm. Buell of Gates, near this city, which are decidedly extra in both size and weight. Several of the heads measure from eleven to twelve inches in length." Inclosed I forward a head of oats grown on my farm, measuring *seventeen* inches! A trifle *a-head* of Judge Buell's "decidedly extra" oats.

In the same Rural, Mr. L. A. Beebe of Lima, tells of his sowing some of the Dayton wheat, side by side, in the same field with the Mediterranean, and thinks it will yield from the same straw one-third more. A head of the Dayton was found to contain *thirty* kernels, while the Mediterranean has only twenty.

Messrs. Editors, is thirty kernels of wheat in a head considered *extra* in western New-York? I have just rubbed out sixty-five kernels of wheat from a head of Gen. Harmon's "improved white Flint wheat," and I have a dozen other varieties that will shell out over thirty kernels to the head.

With this I forward two heads each of the Early Noe, improved white Flint, early Japan, Michigan Tuscany, and white Blue stem. Will you oblige by rubbing out and counting the grains of each variety, and give the result in connection with this? You will see the midge has injured the crop somewhat. Last week I carried a *grist* of the white Flint to the mill; no toll was taken, and the yield of flour was 50 lbs., and of as good a quality as Haxall's best brands. The wheat weighed 66 lbs. per bushel, and I am very happy in saying that there are scores of farmers in this town that have grown fine crops of winter wheat the present season, and the spring sown is super-extra. LEVI BARTLETT.

Warner, N. H., Aug. 14, 1860.

We have complied with our correspondent's request, and find that the heads of Michigan Tuscany contain 70 and 63 kernels—the Early Japan, 53 and 56—Gen. Harmon's White Flint, 53 and 55—White Blue Stem, 38 and 42—and the Early Noe, 25 and 28 kernels each. Pretty good for New-Hampshire! The Tuscany, White Flint, and Blue Stem are very fine samples of wheat.

DRAINING HILL-SIDES.

"There is much upland," says the Boston Cultivator, "that only requires to have the water taken away from it, to become at once and permanently productive in the most valuable crops. Such are frequently the sides of large hills, where the water soaks slowly through the soil near the surface. These water-soaked spots may be known by the tendency to produce rushes, and such bushes as grow in swamps. From their position in regard to retaining the wash of other parts of the field, these spots are often comparatively rich, comprising a proper mixture of the mineral and vegetable elements."

Such situations cannot be drained by open drains; they allow a large portion of the water to run in from the surface, which thus washes in the finer and richer portions of the soil. Underdrains laid with tile or stone should be provided, and carefully covered, so that no water can enter them except by filtration, and then the soil will retain the principal fertilizing matters, and prove very productive in almost any crop.

[For the Country Gentleman and Cultivator.]

WHEAT GROWING AND THE MIDGE.

MESSRS. EDITORS—We have another good crop of wheat in Western New-York, and to all farmers of an observing and investigating turn of mind, it is a good subject of inquiry why we raise so much better wheat now than we did from three to six or seven years ago. And what is the reason the midge has not destroyed it for two or three seasons back, as they did during the years before referred to? The usual answer to this question is, that farmers sow early kinds of wheat on good wheat land, and put it in well, and in good season. This is all true as far as it goes, but in my opinion it does not cover the whole ground. That is, though it may give some of the principal reasons why wheat does well, it by no means gives all of them.

One of the principal reasons why the midge has destroyed but little wheat during the last two years, may be found in the fact that we have had early seasons. That not only wheat, but as a general thing, all other crops have been much earlier than they had for some years before; so that wheat by heading out some two weeks or more earlier than it had for some years before, got the start of the midge, and, where other things were favorable, made a fine crop.

The influence of different seasons in favoring or preventing the operations of the midge, may perhaps be better understood by referring to the manner in which they first made their appearance and commenced the destruction of wheat in this vicinity. They were first found in a few late heads near the fences, but not early enough, nor enough of them to do much damage. The next year they were a little earlier and more of them, and so continuing to make their appearance earlier and to destroy more and more each year, until there was but very little wheat that escaped their ravages, and the prevailing opinion in this section seemed to be, that we would have to stop raising wheat. But what now seems to be generally forgotten, is the fact that while the midge was the most destructive, we had very late seasons; that wheat was not ready to harvest until nearly or quite the first of August, and that we were able to raise but very little wheat until the seasons changed, and wheat headed out some two weeks or more earlier than it had for several years before. Nor does the fact seem to be very generally considered and understood, that the change two years ago was not a gradual one. Instead of a moderate change of a few days each year, which the midge would be likely to keep pace with, the season in 1858 was some two weeks or more earlier than it had been for some years before; and that this, together with the fact that last season was a little earlier than the year before, and that this has been a few days earlier than the last, accounts for the continued good crops of wheat that have been grown, notwithstanding the midge have made their appearance a few days earlier each year.

This brings us to the consideration of a fact, that seems to be almost entirely ignored or forgotten by the farmers of Western New-York, which is, that we cannot always expect early seasons. That sooner or later, and in all probability before many years, they will take a turn; that the change may be a sudden one like that two years ago, with this exception, that the season may be some two weeks or more later instead of earlier. And that when we consider this in connection with the fact that the midge continues to make their appearance several days earlier each year, than they did the preceding one, there would certainly seem to be sufficient reason for farmers to hesitate and be cautious in going into the cultivation of wheat very extensively. And to fear that sooner or later, perhaps another year, a very late spring may cause wheat to be very late in heading out, which would be very likely to result in its entire destruction. But if—when we have another turn in the seasons—the change is a gradual one, the result will be much the same, with this exception, that it will be a little more gradual for a year or two. But with the midge coming a little earlier each year, and the

season gradually getting later, it cannot be many years before wheat will be mostly destroyed. So that in any case we cannot reasonably expect to be free from their ravages many years. Hence, it will be well for wheat growers in midge infested sections, to remember that no one can tell how soon a change in the seasons may expose their wheat to destruction.

Another thing worth noticing in relation to raising wheat is, the general, in fact almost uniformly heavy crops that have been grown for the last few years. This is more especially worthy of remark the present season, as the latter part of the winter and first half of the spring, were in consequence of a very unusual and long continued term of freezing and thawing weather, very unfavorable for the crop. This heavy growth of wheat may be accounted for, by the fact that the land had not been in wheat in five or six, and perhaps in many instances, seven or eight years, and as a general thing had been seeded down the most of that time, thus giving it a good long time to rest and recover from previous exhaustion. To which perhaps, it may be well to add, that in consequence of the cessation of wheat raising, more land has been seeded to grass, more stock kept, and more manure made and applied than ever before.

Now all of this, in my opinion, goes to show that it is better policy for the farmer not to sow wheat very extensively, but by giving his land a good chance, and cultivating and manuring well what he does sow, raise heavy crops. Another advantage in this course is, that good, heavy wheat is almost always earlier, and less liable to be injured by the midge, than a poor crop. And should we sooner or later, as most likely we shall, have late adverse seasons in which the midge is very destructive, there will be a great deal less loss in labor, seed, and the use of the land, than there would be were farmers to return to their old practice of making wheat their main dependence.

Western New-York, 1860.

P. F.

[For the Country Gentleman and Cultivator.]

ABOUT WHEAT.

EDS. CO. GENT.—Farming on a small scale, I have only the experience of a small farmer to give; but, as this experience can be applied to more extensive operations, it may not be out of place to give it publicity. My present communication will have reference to a crop of wheat of the last year's growth. It consisted of about one and a half acres on a gravelly soil. The ground was fitted by raising a crop of peas, which was harvested in August, after which the land was plowed about ten inches deep, and then covered with well rotted manure; a part from an old chip yard, and the remainder from a heap of barnyard manure which had been moved and shoveled over sufficiently to secure its rotting.

The manure on the land was thoroughly dragged so as to be mixed with the soil, and the wheat sowed about the 5th of September. The crop has just been harvested and housed; and the result, so far as known, is thirteen hundred and fifty bundles of plump, clean wheat of the Mediterranean kind.

I do not think it as well filled as in some instances, owing perhaps to its lodging early. By the bye, is not the Mediterranean too much given to lodge, when sown on highly cultivated land? I infer this may be so from a remark of J. Johnston, in a communication in your paper of the 26th inst. In speaking of the Missouri May wheat and of Soules, both of which were heavy crops on the part of his farm sold last year, he says: "if Mediterranean had been sown on the same field, the wheat would have been down flat, while now, none of it is down."

This remark, in connection with my experience with the Mediterranean the last year, would lead me to prefer some other kind to this, if I were to sow on highly enriched soils. I will only add, that I am in favor of surface manuring for wheat if we desire the greatest benefit to the incoming crop. I have no doubt that in the case given above, it more than doubled the amount raised from the given field. S. W. R. Clinton, July 30, 1860.

Inquiries and Answers.

NEW ROCHELLE BLACKBERRY.—"What is the latest experience with this berry, and in other places than where first raised? B. B." [The only complaint we have heard is sourness or a want of good flavor, in some localities or seasons. Although not equal to some varieties, we have nevertheless found the fruit very agreeable, and possessing an important advantage in being less seedy than any other sort. When properly cultivated, pinched back and pruned, it is enormously productive. We have just examined a few bushes, with a view to answering this inquiry, and selecting a single cane, three feet and a half high, counted 327 berries on it. Others appeared to be as productive. The size of well grown berries is about an inch long, and three-fourths in diameter. These bushes are now growing their third summer since planting.]

HAY-SPREADING MACHINE.—"Can you inform me the value of Stoddard's Hay-Spreader?" We have no knowledge of this machine, other than from the examination of the cut which has appeared in some of the agricultural papers. It does not appear to be essentially different from the hay-spreader which has been long used in England, and which we figured and described many years ago in the CULTIVATOR, from an imported one which had been tested in Western New-York. In the moist climate of England it is of more value than here. It is a heavy, costly, complex machine, and the imported ones were soon thrown aside. They would be now of still less value since mowing machines are so generally used, and which leave the grass evenly distributed over the surface.

CHERRIES.—"I have a fine lot of dwarf cherries. Will they bear higher culture than cherries on Mazzard stocks? Has the Gov. Wood cherry proved to be a superior variety? B. Humboldt Co., Cal." [Cherry trees will grow about as vigorously on Mahaleb stocks as on the common or Mazzard root, and should be properly cultivated, but not much enriched. In the west, where the heart varieties fail, the Mahaleb will only partially prevent the evil, or in but a slight degree—but the Morello and Duke cherries, worked on the Mahaleb, succeed finely, and may be very freely cultivated. The Gov. Wood proves to be one of the very best sorts grown.]

ICE HOUSE.—"What is the best method of constructing an ice house in the open air? We have a building in the house cellar, made for that purpose, and we have but one objection to it, which is this: If it is ever so well packed, in the best season, and with the best of ice, the ice is sure to lose its *resistibility* before the close of dog days, the time it is most desired. Will the editors, or some of the readers of the Co. GEN. or CULTIVATOR, propose a remedy? I. W. SANBORN. Lyndon, Vt." [We cannot inform our correspondent the reason of the disappearance of his ice, without knowing the size of the vault, mode of packing, thickness of sawdust, facilities for ventilation, and manner of drainage. The latter is very important, and must be so that the water shall immediately pass off as the ice melts, and must at the same time prevent the cold air, which settles downward, from passing off also, else the warm air will flow in from above, and the current thus produced will melt the ice rapidly. The size of the vault must be large enough to hold a good supply, and to keep a cold mass large enough to prevent access of warmth to the inner portions. Six or seven feet square is as small as will answer. The sawdust should surround the ice a foot in thickness, either in the exterior and permanent walls of the ice house, or within the walls, or both. The ice must be sawed in blocks of uniform size, so as to be packed in a solid mass. Ventilation of the upper part of the house is essential, to prevent heating. Sawdust may be applied so thick or copiously as to *heat* and do injury. An unmatched board bottom, with the small cracks between the boards to allow the escape of water, and then six or eight inches of sawdust, we have found to make good drainage. The sawdust must be packed even and solid—ice is often rapidly lost by the sawdust being too loose, and admitting currents of warm air as the cold air flows out below. An ice house above ground is best, is more accessible in every respect, and may be far more easily filled. It is usual to make simply double board walls, with a space of ten inches or a foot, filled with well rammed tan or sawdust; in which case a few inches of sawdust inside the walls, and surrounding the ice, will be sufficient. But we have seen ice kept in the best manner packed in nothing but a board shanty, without double walls, care being taken to pack a wall of sawdust a foot thick on every side. For a family of about eight persons we have an abundant supply of ice furnished by means of a house eight feet by ten outside, (eight feet high,) and six by eight feet inside. It has two double doors, one for entering above when

the vault is nearly full, and the other lower down, for passing in when it is nearly empty. Three or four loads of ice will fill it.]

GRAIN BINDERS.—Mr. Hawk of Richland Co., O., inquires of the operation of the binders attached to reaping machines. "Sherwood's Grain Binder" enables one man to take care of the grain as fast as cut by the reaper, (say ten acres per day,) in good order. It is bound by a fine wire on the platform, with very little scattering, giving the attendant plenty of time for the operation, and saving at least the labor of three hands otherwise required. N. Monroe Co., N. Y.

JOINT WORM IN RYE.—THE BARLEY FLY.—We learn from various sources that the rye crop of the New-England States is suffering very materially the present season from the joint worm, which causes it to crinkle down and fill very imperfectly, or not at all. The stalks effected have enlarged joints or bunches near them, in which a maggot is found, which, the next season, hatches into a fly, which is the insect originating the mischief. A similar fly has been very prevalent in barley in this State, discouraging its culture, but we believe that in some instances this season, where this grain has heretofore suffered much from this insect, very early sown barley has almost entirely escaped, while the late sown is almost ruined. We should be glad to learn whether this is generally the case. Niagara Co., N. Y.

STABLE FLOORS, &c.—I wish to inquire what will make the best floor for stables in a basement story. There is plenty of timber at hand, stone and gravel. I intend to make stall-tials, as it is recommended by many. Will some one give me the description and the method of fastening all at a time? Perhaps Mr. BARTLETT can give the Shaker plan. The rest of my stables are stalls with chains, which I thought the best plan, but I want to keep up with the times. H. P. NORRIS.

LANGSTROTH'S BEE-HIVE.—Can you, or any of your correspondents, inform me through the columns of your paper, what the right of using Langstroth's patent movable frame hive costs? Also the cost of constructing them compared with those described in the Register of Rural Affairs of 1858. APIS.

SMUT IN WHEAT.—BRINING AND LIMING.—I have often seen the statement that to soak seed wheat in brine, and then coat it with fresh slaked lime, would prevent the appearance of smut in the future crop, but in my case, the present year, it proves no preventive. Last year I saw very little, if any, smut in my spring wheat; this year, though the seed was brined and limed, it is quite abundant. Perhaps it may have prevailed in the China Tea variety, procured of a neighbor, which I mixed with my own Black Sea, and brined mainly with a view to float out the oats, barley, and light grains of wheat found therein. What causes smut, and is there any other remedy save to sow seed perfectly free from it? TYRO.

THE BIRDS.—Could you or any of your readers tell through the CULTIVATOR what will prevent the birds from picking strawberries, currants and raspberries; any information would be gratefully received by many. A. G.

BREAD.—You have published a number of recipes for making bread, but none that I have seen for making it from unbolted wheat flour. Will not some one tell us something about it? W. Circleville, O.

GOOD PUMP.—I notice a correspondent in the Co. GEN. of the 19th inst., makes inquiry for a good well or cistern pump. I would refer him to Young's Rotary Pump, being, in my opinion, the best in use. It does not lift with an endless chain, as I suppose to be the case with the one in use by your correspondent. I am not mechanic enough to describe it, but I feel assured that it would be free from the great objection to force and suction pumps, also the endless chain pump; it is not liable to get out of order, in fact it looks as if it would work for an age without repair. It is immersed entirely under the water, and is its own lubricator—has no valves or stuffing boxes, no chambers to be kept air-tight, and as it is under water is not liable to injury by frost, and wastes sufficient water to empty the pipe before the water would freeze in it. I think it is the invention of Wm. A. Young of Charlotte, N. C. B. C. Chattanooga, Tenn.

IRON WEED.—Would say to "P. D.," the mode of killing iron weed on pasture grounds that I have practiced or known, is to cut them down repeatedly, and not allow them to seed or even blossom. If persevered in, I think this method will ultimately eradicate them. If there is another more efficient and expeditious way of killing them, other than with the plow, I would like to become acquainted with it. J. M.

Deerfield, Va.

REFINING WINE.—How much isinglass is required to refine one gallon of wine? When should it be put in? I. [Will]

some of our wine making readers please give us the desired information.]

A BARN-YARD PUMP.—I have a well in my barn-yard forty feet deep, and would very much like to hear of a good practical pump for it. Something not liable to get out of order, anti-freezing, and constructed perhaps upon the lift and force principle. Have you, within the commonwealth of New-York, such a pump for a farmer? My well is required to serve 50 to 60 head of cattle and horses, and has ample water for that purpose. I have been using the endless chain pumps, after taking out the common stock pumps twice, and throwing them aside, as not answering, from the buckets and their leathers wearing out so rapidly. My farm hands think there must be, or ought to be, some pump invented for this purpose, that would save their arms from the almost endless crank-turning which the endless chain pump demands of them.—*Brandywine, Delaware.* [Cowing & Co. of Seneca Falls, N. Y., make an excellent forcing pump, which has been found valuable for deep wells, where large quantities of water are required—and they can doubtless give all the information required. We have seen also a strong recommendation of a forcing pump manufactured by J. M. Edney, 147 Chambers street, N. Y., but we do not know personally its quality. For smaller quantities, Winegar's elevator, figured and described on p. 272 of the COUNTRY GENTLEMAN, vol. ix, answers a good purpose.]

MANURING TREES AND VEGETABLES.—Shall I apply to my young fruit trees this fall, clear manure or a compost? If the latter, what should be its composition? I apply the kitchen and chamber slops and the washing suds to my young trees. Is it right? How shall I prepare the contents of a privy to render it suitable for fertilizing my garden? Is there any truth in the assertion that vegetables raised on ground fertilized with human excrements, are unhealthy? *J. I. F. Middletown, N. Y.* [Unfermented manure does well when applied in the fall as a top-dressing to trees. The rains and melting snows dissolve a portion and carry fertility down among the roots. In the spring the remainder may be spaded in, if the soil is light, or left near or at the surface, if it is heavy. When manure is applied more nearly in contact with the roots, it should be old or decayed, or in the form of compost. The best compost, for general purposes, and for common soils, is a well rotted mixture of yard or stable manure and muck or turf, with a small portion (say a twentieth) of ashes. The slops mentioned are good for trees—but care must be taken to apply them properly, that is, not at the foot of the trunk, where the tree does not want them, but over the surface as far as the small roots extend, which is usually about as far from the trunk, *each way*, as the height of the tree. Frequent or daily applications of coal ashes to vaults, will destroy all the bad odor, and form the whole into a good compost, that may be easily and comfortably shovelled out. In the absence of coal ashes, thoroughly dried muck, or pulverized charcoal, if in sufficient quantity, will answer a good purpose. There must be enough of either material to render the contents dry and pulverable. There is no truth in the assertion that night-soil grows unhealthy vegetables. The complete decay and decomposition of the manure takes place, and totally new compounds are formed, so that, through a wonderful provision of Creative Wisdom, decayed and foetid matter is converted into the most beautiful and delicate structures of vegetable tissue—into pure vegetables, delicious fruits, and into blushing and fragrant flowers.]

PEARS ON QUINCE—PEACHES ON PLUMS.—1. Can the pear be successfully propagated by root-grafting on the Angers quince roots, instead of budding? [Experiments have generally been unsuccessful.]—2. Is not the peach, when worked on plum stocks, more hardy, and does it not blossom later in spring than upon its own roots? On our lowest grounds, such as "creek bottoms," the peach crop is more liable to be destroyed by spring frosts than on high land; hence we wish to learn if we cannot succeed better with peaches on low ground by working on plum stocks. [The peach is a little more dwarfed and rendered slightly hardier on plum stocks—similar to the effects of a hard soil and moderate cultivation—but the difference is slight. It is much more important to select elevated sites, out of the reach of valley frosts.]—3. At what height should the plum stock be "budded" or grafted? *A. BABCOCK. Union Co., Ill.* [Near, or within a few inches of the ground.]

A NEW WEED.—Enclosed I send you a weed that I should like to know the name of. It is a very bad weed, and it is spreading fast in this vicinity, and where it grows it runs out the grass, and where the land is plowed the more rank it grows. Now if you can give me any information in regard

to this weed, and the best mode of destroying it, through your paper, it will be thankfully received. *WM. BLAKELY. Bloomville.* [The plant forwarded appears to be a species of *Vernonia*, which we are not acquainted with, and we cannot therefore give the best mode of extirpation.]

NEW ROCHELLE BLACKBERRY.—Can you inform me the time to plant Lawton Blackberry seed, and how much seed to the acre, and the price per pound for the seed? *M. B. OVIATT. Euclid, O.* [We are not aware that the seed is offered in market. It should be mixed with slightly moist sand soon after washing out—and should be sown late in autumn in rich garden mould, buried half an inch to an inch deep, according to the porosity or heaviness of the soil. After one or two years growth, plants may be set out in rows six or eight feet apart, and four or five feet in the row, and kept constantly cultivated, and properly pinched in in summer. As new varieties will thus be produced, most of them will probably be inferior to the genuine Rochelle, misnamed the Lawton. The genuine plants are obtained only from the root.]

DISEASE IN CATAWBA GRAPES.—You will find inclosed some diseased Catawba grapes. I lost them last year by the same disease. The cause, and a remedy, would be thankfully received through the columns of THE CULTIVATOR. *CHARLES MASON. Sterling Hill, Ct.* [The disease is probably the rot, so destructive to the Catawba grape at the west. We do not know a remedy, although a well drained subsoil is generally regarded as most likely to be free from it.]

PEAVINE CLOVER.—I see a notice of the peavine clover. Can I get some in the city of New-York? If so, of whom? *B. C.* [It can probably be procured of J. M. Thorburn & Co. of New-York.]

BARREN RASPBERRY PLANTS.—I wish to ask in reference to my white raspberry. A year ago last fall I set out quite a quantity, and was very particular in taking them up. They scarcely wilted, but grew right on, blossomed last summer, but no berry; this season they were and are very fine and rank, bloomed finely, but not a berry, but instead a kind of cup—rather a depression than swelling berry. They were taken from a neglected patch said to be of a good kind, but as I since learned had never borne. Please tell me if the male and female blossom are on the same stalk? I fear they are all males. Or can you tell if anything can be done with them except cutting them down. *J. S. WOOD. Lansing, Mich.* [The raspberry usually has perfect flowers—some varieties have badly developed ones in unfavorable localities—this may be the case with the plants set out by our correspondent. With some partially fruiting sorts, summer pruning will assist productiveness that is, pinching off the ends of the new shoots or canes when three or four feet high. The result will be visible another year. We would recommend him to procure Brinckle's Orange, and perhaps Fastoff, Knevett's Giant, and Franconia. The first is very prolific—the others usually nearly as much so. They should be laid down and slightly covered in winter with an inch of earth—a precaution that will often give good crops when otherwise there would be few or none.]

OSAGE ORANGE FROM LAYERS.—Can you inform me through THE CULTIVATOR if the Osage Orange will root by laying—also the best means for causing plants to root that are backward to do so, as it is of great importance where plants have missed and others cannot be got to grow for the shade of the old ones—also the best size and shape of bee-hives, with the best information on their management. *A SUBSCRIBER. Apansose, Ill.* [The Osage Orange may be raised from layers, by bending down the young and fresh growing shoots; covering in little trenches made for the purpose with a few inches of earth, and then bringing the end of each shoot in an upright position. It is much cheaper and easier to raise from seed. It is hard to fill gaps in hedges—the young plants are overshadowed. Pains should be taken in starting a hedge, to set out none but good evenly selected plants. In order to get the desired information on bees fully, procure Quinby's book, which is sent by mail for one dollar.]

POTATO BUG.—Will you inquire through the columns of THE CULTIVATOR, what will destroy the bug known as the potato bug? I planted four acres in potatoes early in February, and about the time they began to bloom, thousands of these striped bugs, that go in schools, took possession of the lot and stripped them of every particle of verdure. I have used lime and ashes, but nothing that I have been able to discover will stop their ravages. *E. DASHIELL. Tenn.*

PITS.—Nearly a year ago some one in your columns, promised to give us some directions for the construction of pits for the reception of tender plants in winter. Isn't it about time he was doing it? *W. Ohio.*

HORTICULTURAL SUGGESTIONS.

Cultivators, who gave close attention to their trees, grounds, and gardens, early in the season, frequently forget many important operations of a minor character at this season of the year. An occasional reminder may therefore be useful.

Manure is the mainspring of successful growth; make ample provision therefore for a full supply, thoroughly prepared by composting. A famous horticultural establishment, where nothing scarcely ever fails to grow and flourish, keeps one man constantly employed, with necessary assistants, year in and year out, in manufacturing and mixing fine composts of various kinds.

Record the names of young or newly set fruit trees in orchards and gardens. Label them distinctly, and register them in a book kept on purpose. Planters are often careless until the trees bear, and then they would gladly know the names, but cannot find them.

Weeds are apt to be overlooked at this time, and allowed to ripen seeds enough for another whole season of labor in extirpating them. Remember, it is easier to dig and destroy one weed now, than a thousand next year. Cabbages, root crops, nursery rows, &c., should therefore be kept thoroughly cleaned.

Blackberries and *Raspberries* should have the old canes cut out, that have done bearing, allowing the new canes for next year's crop a better opportunity for maturing and hardening.

Grapes, to keep well, should be well ripened. The main stalk of the bunch, of the *Isabella*, for example, should have changed to purple, as an indication of full maturity. This full maturity, in the Northern States, can be only attained by rich and good culture and proper pruning. The thick brush of neglected vines bear smaller grapes, with half-ripened, acid flavor, and green stalks—these will freeze more easily than fully ripened specimens, and wilt if too dry, or decay if too wet, much sooner than those handsomely matured.

Tomatoes keep in bottles or cans more perfectly than any other fruit, and with simple preparation, or brief cooking. Lay in a good supply early, while the fruit is high-flavored with summer suns.

Sow *Lettuce* and *Spinach* for early spring use. A snowbank makes an excellent covering for them during winter, and they may therefore be sown where snow is expected to accumulate, with the previous addition of brush and coarse litter, and evergreen boughs. Lettuce may be had very early in the spring by transplanting these wintered plants into the hotbed as soon as made. They will be fit to use in a few days, two or three weeks before hotbed plants sown from seed.

Seeds, of vegetables and flowers, should be gathered as they ripen, wrapped in papers, carefully marked; adding the year, and placed in a dry drawer or on a shelf. Such seeds as do not readily shell out should be placed on spread newspapers, in a garret or on a broad shelf, and allowed to remain there for a few days, or longer, as required.

Strawberries, not already set out, should be left till next spring, as they cannot grow much after the present time, and will be in danger of being thrown out or destroyed by the frost of winter.

Pears should be picked a week before they would fully ripen on the tree, and placed in drawers or dark boxes to mature. They will thus color finer, ripen more deliciously, and those liable to rot at the core, be far less

liable to this disaster. There are very few pears that are not made better by such treatment. The *Bartlett*, by keeping it in a dark drawer for a week, will often present a brilliant carmine cheek, when otherwise a faint brownish shade only would be seen. The *Bartlett* will ripen well in this way, even if picked before fully grown; the *English Jargonelle*, always rotten at the core if matured on the tree, becomes a good pear by house ripening.

On the other hand, a peach is never good unless fully matured on the tree.

Peach trees and late growing kinds may be budded as long as the bark will peel freely. The ligatures of buds already inserted, should be removed before they cut into the bark by the increased growth of the stock.

Seeds of fruit trees, gathered for planting, must be preserved with some moisture, and not allowed to become very dry, or they will vegetate tardily. This is especially necessary with cherry stones, which must be mixed with moist sand or peat, within a few days after taken from the fruit; and other seeds, as of apple, plum, pear, &c., are better if kept moderately moist, till subjected to frost in winter. Novices often fail to raise chestnuts and horse-chestnuts, because they allow the exterior shell to become dry, or partly so.

Ground for the spring planting of fruit trees, should be prepared in ample season—by underdraining if necessary, deep plowing, subsoiling, applying manure or compost, &c., as the case may require.

TREE ROSES.

MESSRS. EDITORS—Can you inform me what kind of a stock roses are budded upon to make Standard or Tree Roses? Give the whole "modus operandi" of doing it, &c. Also what kind of plants should be in a small flower-garden, three rods long by two rods wide, to have a fine display of flowers during the summer months? Is a *Pæonia* the same as what is called "Piney" in the country?
Georgetown, O. J. C. HARNEY.

The best stocks to bud for tree roses, are strong growing kinds which do not sucker. The hardier sorts of the *Prairie* rose, if first made to grow upright, do well for this purpose. A large number may be kept in an upright position by tying to a horizontal rod at proper height. The *Boursalts* sucker too much. This is also the chief objection to the *Manetti*, an excellent stock in other respects. Tree Roses are difficult to manage, and require skill and much attention to preserve in a symmetrical form, and in a vigorous state of growth and blooming. We would not advise our correspondent to undertake them, except for trial in a small way. If the heads are not as large in diameter as their height, and they are not kept in a free growing state by good culture and pruning, they appear meagre and unsatisfactory. It is usual to bud them three or four feet high, and sometimes more—two or more buds are usually set—and the shoots springing from them are cut back the second year, so as to form an evenly distributed head. Free growing varieties only should be chosen—if of summer blooming sorts, a fine display can be had but once in the season; the strongest growing among the hybrid perpetuals, as *La Reine* and *Mrs. Elliott*, will, with skillful pruning, make good trees, but they will only occasionally bloom, not profusely through the season.

The word "Piney" is a corruption of *Pæonia* or *peony*, and means the same thing.

THE BEST LEGACY.—No man can leave a better legacy to the world than a well educated family.

Abstracts from our Exchanges.

HOMES AT THE EAST.—The Homestead, in an article on "Homes at the West," well says that "homes in the east can be bought for less of labor and life, though for more money. Here, too, there are farms to be bought for less than the buildings and fences cost; but the reason is to be found in the lack of energy, knowledge, common sense of the old proprietors, who have in laziness or ignorance, or for some other reason, allowed the land to run down, the weeds to encroach, and the need of repairs and manure so to press upon them that they have not the energy properly to meet it. These farms are near the school and the church, and near the market; they can be reclaimed, and the old soil will respond quick to the quickening influences of energetic, sensible husbandry. *Not a farm exists in Connecticut, no matter how run down, but it can be renewed and restored to as great fertility as it ever had, from its own resources.* Here is a chance for you, young men—fortune seekers—there is more money to be made with a less outlay of labor and life than in the West."

BOILED CORN FOR HOGS AND OTHER STOCK.—Wm. Van Loon, writing to the Prairie Farmer, says that he has practiced feeding boiled corn to his stock and hogs, and is "satisfied that he saves one-half his grain, and gains as much more in time;" that one bushel of corn on the cob, boiled, will produce as much pork as two fed raw, and in one-half the time. In one experiment he fed three bushels of boiled corn, per day, to 27 hogs, for ten days. The average gain was two pounds per day. He then fed the same lot of hogs on three bushels of raw corn per day for twenty days—they gained a mere trifle over one pound per day. These were small young hogs—larger ones would have fattened better.

FIRE-PROOF WASH FOR SHINGLES.—The following simple application will no doubt prove of great value. We quote from the Albany Knickerbocker: "A wash composed of lime, salt and fine sand, or wood ashes, put on in the ordinary way of whitewashing, renders the roof fifty fold more safe against taking fire from falling cinders or otherwise, in cases of fire in the vicinity. It pays the expense a hundred fold in its preserving influence against the effect of the weather. The older and more weather-beaten the shingles, the more benefit derived. Such shingles generally become more or less warped, rough and cracked; the application of the wash, by wetting the upper surface, restores them at once to their original or first form, thereby closing the space between the shingles, and the lime and sand, by filling up all the cracks and pores in the shingle itself, prevent it from warping for years, if not for ever."

COMPOSTS OF SEAWEED, MUCK AND MANURE.—The following hint (which we find without credit) will be of interest to farmers on the coast, and worthy of the attention of all who can put it in practice: "Let the farmer take four parts of rockweed to two parts of barnyard manure, two parts of muck, have them thoroughly mixed by swine, then piled up to heat, and he can produce more from his farm, and at one-half the expense, than he can by using any of the high-sounding fertilizers. On five-eighths of an acre I cut three tons of hay the first crop. It was done by applying this compost. I would not plow in manure to raise grass, more than three inches; but dress it with a light top-dressing every year, and then have thus grown large crops of hay."

EFFECT OF AGE ON LEATHER.—The Scientific American says "that calf-skin leather, instead of improving in quality with age (as generally supposed) when made into boots, deteriorates rapidly. It is subject to a species of dry rot, and in the course of three years becomes as tender as brown paper. It first appears at the edge near the soles, in the form of a black glossy sweat, resembling varnish, gradually proceeding over the whole." Grease, we are further informed, rather accelerates than arrests this decay; sole leather endures much longer under constant use than when laid away in a dry situation. Cow skin and

kip leather are not thus affected, but the best as well as the poorest calf skins are subject to it.

THE CATALPA FOR FENCE POSTS.—Several facts are given in the Valley Farmer, going to show that the wood of the Catalpa tree is equally as durable for fencing purposes as the red cedar. It grows rapidly, may be readily transplanted, and only needs to grow in situations protected from high winds, (which are very apt to split and break the branches,) to attain to a large size. It is a handsome shade tree, both in flower and foliage; it is little employed save for ornamental planting, out of its indigenous localities along the Ohio River and south of that latitude, though it may readily be grown elsewhere.

PASTURING MEADOWS.—An old farmer, writing to the Boston Cultivator, gives several facts from his experience going to show that newly seeded clover does best when pastured down in the fall, and that "old fog" meadows never produce as valuable hay as they would if fed down moderately in autumn. The grass ought to start close to the ground, and not from the stalks left by the scythe, as in that case the sprouts do not get sap enough to support them and give that quick growth that is required for good hay. He adds also that he "never knew good corn to grow on land that had been mowed several years and the hay carried off, and the old fog left on the land unfed."

MANURING GRASS LANDS WITH STRAW.—A writer in the Prairie Farmer by spreading a quantity of straw over a timothy meadow in the spring, increased the product of hay one-third the same season, and it has been double for two seasons since over the remainder of the field. He says he had no trouble in raking the meadow with a horse-rake without disturbing the mulch, and that he has since used all his coarse litter in the same way, with good results.

MIXED HUSBANDRY—MANURE.—A correspondent of the Ohio Cultivator gives the following illustration of the advantages of raising animals on a farm, for the purpose of the manufacture of manure. He says, if 100 acres are occupied with 75 acres of corn and 25 of grass, about 32 bushels of corn will probably be raised per acre. But if 57 acres are occupied with grass and 25 with corn, the increased manure, and one half the total amount of labor, will give 99 bushels of corn per acre—just as much as before—with a great increase of stock, the land every year becoming more fertile.

GREEN CORN AS A MANURE.—A farmer in Bucks Co., Pa., a few years since, made some experiments going to show the value of growing corn for manurial purposes. On a field of forty-seven acres—part of a farm which had been rented for more than ten years, and had become as most rented farms do, very much impoverished—he sowed ten acres to corn in July, at the rate of two bushels per acre. It was left to grow until about four feet high, and then plowed under about ten inches deep. No manure was put on this part, but the remainder of the field was heavily manured, and the whole sown to wheat. The crop averaged 34 bushels per acre, that on the ten acres fully equal to that dressed with manure. We believe that lime was applied to the whole field before sowing on the grain—assisting with the deeper plowing, very materially in restoring the soil to a highly productive state.

CULTURE OF WINTER BARLEY.—J. Mackelcan of Hamilton, C. W., describes in the Genesee Farmer, the method of growing winter barley practiced by a farmer in that section, and formerly in England. He plows a clean wheat stubble, rather shallow, immediately after harvest; harrows it, and lets it remain until the weeds in the soil have grown up; then manures it heavily. The manure is spread and plowed in six or seven inches deep the middle of September, ridging it up into lands twelve to eighteen feet wide. He sows and harrows in the seed the first week in October—not earlier; two and one-half bushels per acre is the proper quantity. Put in this way, he thinks it less liable to winter-kill than wheat, and far more profitable than spring barley.

The Ag. Society of the Muskingum Valley holds its show this year at Zanesville, Ohio, Sept. 18-21; President, Valentine Best—Secretary, F. A. Seborn.



ALBANY, N. Y., AUGUST, 1860.

☞ We give elsewhere as complete a list as our present data will afford, of the Agricultural Shows and Meetings of the coming Autumn. Will our friends oblige us by furnishing such additions and corrections as they can, in order that we may, if possible, hereafter incorporate with it all the other county and district Fairs to be held throughout the country? This end can be brought about if every reader will take the pains to supply any omissions or correct any errors that he may now discover.

Our list is especially defective in several of the Eastern States, in Pennsylvania, and at the South. At the west we have somewhat fuller returns, but there must be many omissions in all the States, unless it is Ohio, in which we think there cannot be many lacking. Several counties in this State are not yet set down, and we have almost nothing at all from several of the British Provinces.

Imperfect as this list is, however, it is a more complete one than we have ever yet seen published, and with the aid of our friends, as above requested, it can be greatly perfected with little farther difficulty. *Over Four Hundred Fairs are already embraced in it.*

MARKET DAYS.—

At present we believe sales by samples are quite out of the question. Buyers will see what they buy, and will not trust samples.

In conversation with some of our merchants, recently, this subject has been discussed, and we are ashamed to say that their estimate of the honesty of farmers in general is at a very low stand. Several of them tell of the most astonishing disregard of contracts and engagements, and give reason enough for their distrust. This they say will be long a difficulty in the way of establishing market fairs where grain and produce can be sold by sample, and we fear it is so. Of course all admit the punctilious honor and honesty of many, but still assert the reverse as a general rule.

So says the Homestead in commenting upon the subject at our head. We may mention an instance illustrative of the fact that in Great Britain the relative position of the Farmers and the Merchants, is exactly the reverse of what it generally is in this country. The "merchant," as we call him, who keeps the country store, is there looked upon as a tradesman or shopkeeper, and if there is any difference between his social rank and that of the farmer, it is most decidedly in favor of the latter. We regret to say that the common feeling here is too generally of quite the opposite kind; and, until the self-respect of the farmer can be elevated, he will not overcome the difficulty of keeping his sons at home instead of seeing them go away from the farm into any kind of mercantile or peddling trade that comes along.

The same feeling that prevails as to the relative standing of the two classes, is in Great Britain carried out with regard to their relative reputation for "punctilious honor and honesty," and the instance of this referred to in the foregoing paragraph, is the following:—The farmers in the Lothians who make their sales in Edinburgh, not only dispose of their crops by sample, which it is intimated that buyers here dare not do, but they actually *receive their money* on the credit of the sample and *in advance of the delivery of the grain*. The writer, in conversation with that excellent model farmer, Mr. HOPE of Fenton Barns, was inquiring in regard to the Edinburgh Markets, and was told that the farmers about there take up their samples, sell whatever quantity they choose to offer, pocket the cash, and do not deliver the grain sold until their return home. Asking how purchasers liked this arrangement, the answer was that they had often attempted to change it, but "the farmers were too strong for them." "We are known," was the reply, in effect, "as occupants of so much land, where we are always to be found—if we should not live up to our bargains, *there we are*, and the remedy is in the hands of the law. But what do we know about the corn-brokers? If they are at their stands to-day they may meet with misfortunes and be unable to pay what they owe us, to-morrow—at least we can't follow

them up, and should not know where to look for our money."

In general, however, we presume payment is made upon delivery, but the great fact which "crops out" most strongly above, is that the power and public confidence are there *with the Farmer*, whose standing for probity, uprightness, and justice, or even generosity, in dealing with others is certainly unsurpassed by that of any other class in the community. The writer met incidentally with one or two cases, in which farmers whose contracts turned out unusually well for themselves in comparison with the results to the buyer, voluntarily relinquished a part of the advantage for the benefit of the latter; and, while we have also known of similar instances in this country, we regret that we cannot regard the strictures of our contemporary as wholly unfounded or uncalled for with respect to the dealings that take place among far too large a part of our farmers.

PROSPECTS OF THE ELMIRA FAIR.—We are glad to know that the prospects are now good for a thoroughly successful Show at Elmira. Secretary JOHNSON says, in the State Society's Journal, that according to present indications "the exhibition will be equal to those that have preceded it. Already notices of exhibiting stock, implements, &c., from different portions of the State are more numerous than they were last year at this time." The Prize List contains a new feature—"For the first time, the Executive Committee have offered a prize for the best bull, cow or heifer, in the five leading breeds—Short-Horns, Devons, Herefords, Ayrshires, and Alderneys—open to *prize animals*, heretofore receiving the first prize; to *American bred and imported stock*. Already we have assurances that this prize will be contended for; and animals equal to any heretofore exhibited will be on the ground, from our own as well as from other States."

PULMONARY OR LUNG MURRAIN, is a name given by the Editor of the Homestead for the cattle disease in Massachusetts, to distinguish it from the common PLEURO-PNEUMONIA, which is a different disease, and not contagious.

We can see no object in thus complicating matters; this disease is popularly known as the *Pleuro-pneumonia* (or "the Pleuro" for short,) throughout Great Britain, and it can only be a source of confusion to christen it differently here. The "common Pleuro-pneumonia" has its aliases already—as "inflammation of the lungs" for instance, or simply Pneumonia, which seem quite sufficient for purposes of distinction.

CHESS IN WHEAT.—Doct. Crane of Franklin, handed into this office last week, several stalks of wheat, the root of which was produced by one kernel of wheat. On these stalks are heads of wheat and heads of chess, each distinctly and fully formed and developed. It has been doubted whether chess ever comes from the well formed, healthy grain: but here is proof positive that it does, for in this instance one and the same kernel has produced both. The curious in such matters can see this sample by calling at the Democrat office.

We copy the above from the *Portage* (Ohio) *Democrat* of August 8, for the purpose of saying that the statement *cannot* be true. A careful examination will show that the chess and wheat have no natural connection with each other, and that each proceeds from its own root.

LEADING ENGLISH MANUFACTURERS OF AGRICULTURAL IMPLEMENTS.—The North British Agriculturist, in an article on the Canterbury Show, gives an estimate of the amount of business done by several of the leading firms, who do not this year exhibit. We quote, changing *pounds* into *dollars*:—The firms absent are Messrs. Clayton & Shuttleworth, who produce annually agricultural implements and machines to the value of \$1,500,000; Messrs. Garrett & Sons, Ransomes & Sims, and Hornsby & Son, who each produce annually to the value of \$500,000; Howard to the value of \$450,000 to \$500,000; Tuxford, Barret & Exall, and Samuelson, who each manufacture to the value of \$350,000; Henry Clayton, to the value of \$250,000; Smith Whitehead, of Preston, H. & E. Crosskill, and one or two others, to the value of \$100,000 to \$150,000. "The absent firms exhibited one-third of the entire money value of the whole implement department at Warwick."

☞ In some recent Notes about Farming in Franklin Co., Mass., the production of Butter and extent of Stock feeding in the town of Greenfield were particularly re-

ferred to. We are now informed that the amount of Butter sent from Greenfield Station to Boston, for the year ending July 15, 1860, reached a total of 201,576 lbs., equal to 100 1576-2000 tuns. The number of cars of stock sent to Cambridge during the year, was 242; of which 142 were sheep, averaging 12,780 sheep; 100 were cattle, averaging 1,500 cattle; total 14,280.

UNLOADING HAY.—Can you give me the post-office address of Mr. G. H. GREGG. In the July no. of THE CULTIVATOR, on page 228, Mr. Gregg describes a mode in use among the Shakers of New-Lebanon, of unloading hay by means of hooks, which strikes me as being superior to the horse-fork, both as to the easement and dispatch. I have used a horse-fork now two seasons, and for me, (being a light man,) I find it hard work to govern the fork as it rises heavily loaded, and rather dangerous, when unloaded, of hitting the man on the mow when the stale falls. I wish to address Mr. Gregg, to get the dimensions of the hooks, that I may get them made, for I feel sure that they will be better for me than the horse-fork. JOHN MOORE, Oxford, N. Y. [We are unable to give Mr. G.'s address, but the above may perhaps draw out the information wanted by our correspondent.]

DRS. A. S. COPEMAN, of Utica, and H. MOORE, of Poughkeepsie, are the Veterinary Surgeons whose names are announced by the President and Secretary of our State Society, pursuant to the Resolutions passed at the last meeting of the Board and published in our columns, "to attend to any requests in relation to the cattle disease, should it appear in our State, and persons desire advice." We do not anticipate that they will have many calls from this source upon their time, but we publish their addresses, as being well qualified with reference to the Pleuro-pneumonia, in order that if any of our readers suspect the presence of the disease they may know to whom they may refer with confidence.

It may be remarked, in connection with this subject, that the Vermont State Society, in common with many in the Eastern States, have determined to offer no cattle premiums this season. As a measure of precaution throughout New-England, this is very well, but we see little reason for hesitation as to exhibiting cattle anywhere in New-York or other States. Our western friends in some localities appear to be exerting themselves somewhat to excite apprehensions—wholly without any reasonable cause so far as we can discover. Elsewhere the "panic" has apparently had its course. A correspondent writes us under date of Greenfield, Mass., July 30: "The cattle disease undoubtedly exists yet in Worcester county, but it has never been west of the Connecticut river."

Public attention was first called to the importance of *fast walking horses* for Agricultural purposes, we think, through the columns of the Co. GENT., and the suggestion made that our Societies should offer prizes, having in view the encouragement of this particular object. At the last meeting of the Executive Committee of our State Ag. Society, a communication was presented from Lewis B. Brown, Esq., of New-York, a life member of the Society, placing at their disposal the sum of \$25 for premiums of this kind—a public spirited offer which was at once accepted by the Board, and, at the Elmira Fair the sum of \$15 will therefore be awarded for the best and fastest span of matched horses or mares, and \$10 for the best and fastest walking horse, mare or gelding. We learn that Mr. Brown has also offered a similar amount to be awarded at the National Horse Show at Springfield, Mass., the first week in September.

VELOCITY OF MOWING MACHINES.—Mowing machines usually cut on an average a strip of grass a little over four feet wide. The knife is longer, but the driver cannot use its whole breadth without danger of leaving an uncut strip. If the speed of the horses, therefore, average two miles an hour, including stopping to clear obstructions, turning, &c., just one acre will be cut in an hour. In ordinary practice, the various delays reduce the amount to nearer an acre in two hours. We observe, however, in the last number of the *New-England Farmer*, an account of the

operations of a newly made Ketchum mower, on the farm of J. B. Shurtleff, near Boston, where over an acre was cut at the rate of an acre in twenty-four minutes. The grass was a ton and a half to two tons per acre, and the weather excessively hot and close. On the previous day, which was cool, the same team and machine is reported to have cut an acre in fifteen minutes.

The knife bar was six feet long, and the swath averaged five feet and six inches—requiring three swaths to make a rod wide. Consequently, a mile and a half must be travelled for each acre; and in cutting the acre in 24 minutes, as above stated, the speed of the team, *including all stoppages*, must have been three miles and three-quarters per hour; and in cutting the same amount in fifteen minutes, as reported, the average speed, also including stoppages, must have been *six miles an hour*. Is there not some mistake in the statement?

LARGE PREMIUMS.—The Directors of the Livingston County Agricultural Society offer the following premiums, to be competed for at their Annual Cattle Show in Genesee, occurring September 26, 27 and 28:—

Best thorough bred Durham Bull, 3 years old or over,.....	\$100
Best 2 years old Durham Bull,.....	30

Competition is open to the United States and Canada. The Awarding Committee consists of Hon. A. B. Dickinson, Hon. James S. Wadsworth and Messrs. Freeman, Barber and Blake.

WHEAT FROM THE NORTH LATER IN RIPENING.—A farmer in Pennsylvania, thinking that seed wheat from the North, like seed corn, would ripen earlier when taken South, last year procured several bushels from Canada, two hundred miles north, and sowed it at the same time with home-grown sorts. It ripened, according to the Genesee Farmer, two weeks *later* than the native seed, as we might reasonably expect.

NORTH CAROLINA.—A correspondent in New Hanover county, writes us that there is a decided spirit of improvement among farmers, manifest in that county, and that the County Ag. Society have purchased a beautiful sight for their Fair grounds on the plank road near Wilmington, and will soon commence the erection of the necessary buildings, &c., to put their grounds in order for the coming Fair. That portion of his letter in relation to the chief crop of his vicinity will be published next week.

We are indebted to a friend who arrived last week by the Persia, and who was present at the recent Paris Agricultural Show, for a copy of the Prize List and Catalogue of the Exhibition, which certainly deserves a brief notice in these columns, although we have not the space at command to give anything like a just idea of the extent of the ground covered, and the apparent perfection attained in all the arrangements and regulations concerned.

The Catalogue contains 650 pages half the size of those of the Co. GENT., in paper cover, with large plates folded in, representing plans of the grounds, and of the *Palais d'Industrie* where the Exhibition was held—the whole sold at the marvellously low price of *one franc* (20 cts.) Seventy odd pages are filled with the decrees establishing the prizes and regulations, together with the names of officials. Then follow *Les Especes Chevaline et Asine* (Horses and Asses) to the number of 788, divided into English blood, Arabian blood, and Anglo-Arabian blood horses; half-bloods for Coach-Horses, comprising Normans and other French breeds classified according to the Departments from which they come; "light" carriage horses, and heavy and light draught horses in similar classification, concluding with the breeds of Asses of Poitou and the Pyrenees. The entries of Cattle are 1,475 in number—the pure French races, followed by the Durhams and Ayrshires as representatives of England, then the Holland and Swiss breeds in classes by themselves, then every imaginable cross of the Short-Horn, concluding with other mixed bloods. The entries of Sheep were 548; of Swine, 243; of Poultry, (a few goats included,) 921; of Bees, 1; under the head of *Instruments*, 3,976, including not only all sorts of implements, but also books, plans and engravings; of "Products" 3,615, under which head come But-

ter and Cheese, Wines, Grains, Vegetables, Tobacco, and almost every sort of agricultural production, whether in the raw or manufactured state. The whole concludes with a list of five or six hundred samples of Algerian products.

We have made no calculation of the aggregate amount of the prizes offered, but when we say that first prizes for horses run from 800 up to 1500 francs, (\$160 to \$300,) first prizes for cattle from \$100 to \$140, and for sheep and swine from \$60 to \$80, it will readily be seen that with so many classes the amount could not have been by any means a trifling one.

THE POTATO DISEASE.—It has already indicated its presence among us. Some two weeks since our tops showed signs of affection, but the cessation of rains for that time has stayed the progress of the disease in a good degree. Some early kinds have rotted, and all our different varieties are plainly predisposed to the malady. All that seemed necessary to hasten the terrible calamity was rain, and we are this—Monday—morning, getting a plentiful shower, and may now look for the work to progress with fearful rapidity. Strange disease! this potato rot. Who shall satisfactorily explain its causes? S. W. R.
Clinton, Onelda Co., Aug. 13.

Mr. Obed Hussey, of Baltimore, the inventor of numerous improvements in Agricultural implements and machinery, but best known from the Reaper which bears his name, recently lost his life at Exeter, N. H., by falling between the railway cars, his seat in which he had left for the purpose of procuring a glass of water for a little child near him who complained of thirst. Mr. H. was a native of Maine it appears, and was on his way thither upon a visit. He was 68 years of age, and a worthy member of the Society of Friends. We have had few more persistent and industrious inventors, but many who with less desert have been more the favorites of fortune.

REAPING MACHINES IN FRANCE.—The results are now before us of the Imperial Trial of Reaping Machines at Fougilleuse the first week in August. "It was in every way an important one," writes the Mark-Lane Express, "whether we take the English firms, as represented on the occasion, or in comparison with the French manufactures brought out to oppose them. The entries reached to thirty-nine, and the nineteen English included Burgess and Key's McCormick; Cranston's Wood; Bell's; and Cuthbert's; while there were five of the French. In so bad a condition, however, was some of the crop, that only two machines got through their work in good time—Burgess and Key, and Dr. Mazier. The award was ultimately thus declared: 1st prize and grand medal of honor as the best of all machines tried—Burgess and Key; 2d prize—Cuthbert; 3d prize—Wood. French machines: 1st prize—Dr. Mazier; 2d prize not awarded; 3d, Legendre. The Emperor himself was present at the trials, and evinced much interest in examining the several implements at work."

FATTENING CATTLE ON EARLY CUT HAY.—A writer in the Boston Cultivator, says that "John Ball, of Langdon, has fattened cattle every winter, for more than twenty years past, on no other feed than hay." He generally commences haying about the 20th of June, and reserves the hay first cut, for feeding that portion of his stock intended to be sold for beef in the spring. Hay allowed to ripen its seed is of very little value; though the whole should be eaten by stock, the seed remains undigested, and therefore furnishes no nutriment.

We are indebted to Dr. ANDREW MCFARLAND, Jacksonville, Ill., for a copy of his Report as Commissioner from that State to investigate the Massachusetts Pleuropneumonia cases. The Country—outside, at least, of the districts which have been the sufferers—will not be without cause for thankfulness in this Cattle Disease attack, if it should have the effect of calling more general attention to the importance of some thorough veterinary knowledge on the part of Farmers themselves, and of a higher standard among those who practice as "Cattle Doctors." Nor will it do any harm that many members of the Medical Profession should have been led, like Dr. M., to investi-

gate more minutely the anatomy of an animal in which so great pecuniary interests are involved, as in the Ox.

We learn from Mr. WEBB that the South-Down ram hired at his last Letting, and subsequently purchased, by Mr. J. C. TAYLOR of New-Jersey, is the one which he exhibited at the Royal Ag. Society's Canterbury Show, and which there received the first prize of £20.

The Philadelphia (Pa.) Society for Promoting Agriculture, is to have an exhibition this year, September 25-28, at Powelton, near that city—Dr. A. L. Kennedy, Secretary. The following Premium is a new feature:—

The Society has been authorized by ELIAS BOUDINOT, Esq., a member, to offer a premium of Fifty Dollars for the best display of RUSTIC SEATS, for the Piazza or Lawn, to be competed for by young farmers, being their own invention and production. It is hoped this handsome premium will attract many competitors.

The Premium List of the Albany Co. Ag. Society is now ready for distribution—show on the Washington Parade Ground in this city, Sept. 18-21. President, Wm. Hurst; Secretary, Jacob C. Cuyler.

The Second Circular of the Maryland Agricultural College, for which we are indebted to some attentive friend, contains the Catalogue of Students at its First Session—nearly seventy in number, so that it may now be considered fairly under way. Pleasantly and accessibly located, it will undoubtedly become a favorite with parents in all the Southern States, and we notice that the two Carolinas, Virginia, Georgia, Delaware, the District of Columbia and Pennsylvania, are already represented among the pupils. Hon. CHAS. B. CALVERT is President of the Board of Trustees, and Dr. MONTGOMERY JOHNS, of the Faculty of Instructors.

Mr. J. WESLEY JONES of Chatham 4 Corners, has shown us some very handsome Hollyhock blooms raised by him the present season, including among others the following sorts:—Solfaterre, Pink Perfection, Purple Defiance, Pride of Denmark, Floral Beauty.

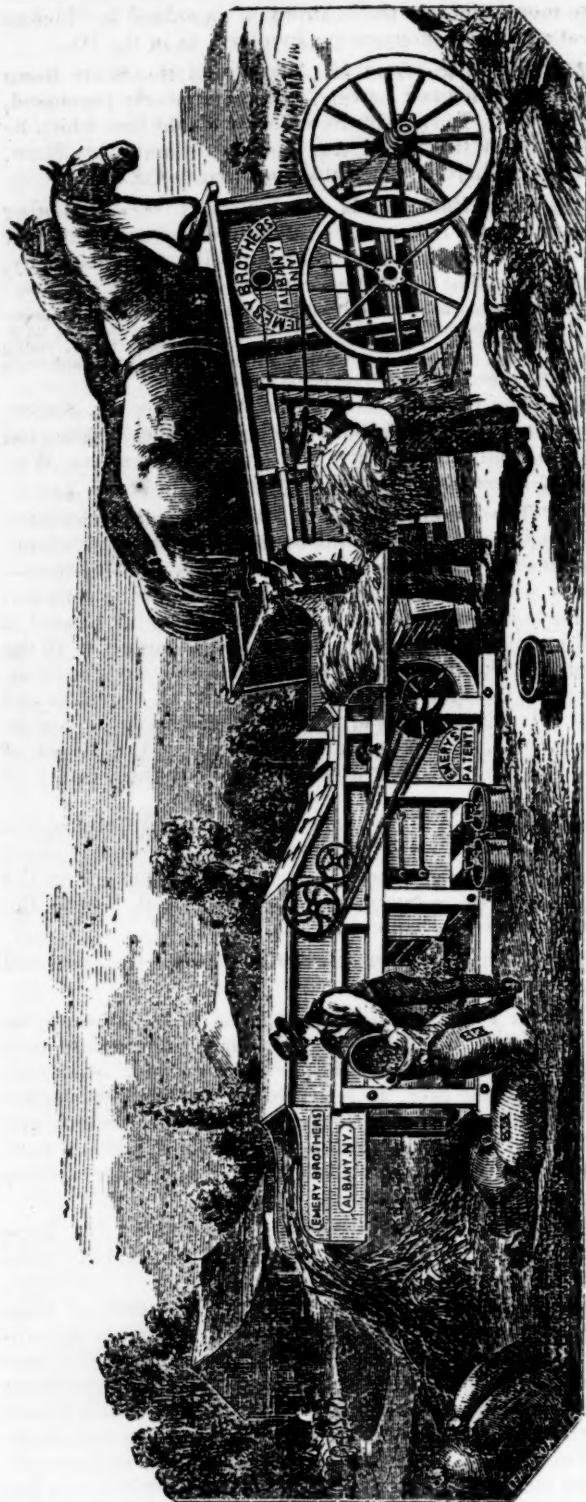
"The Register of Rural Affairs" for 1861 will soon be out.

WATER FOR BEES.—According to a recent work on Bee-Keeping, when bees are building comb rapidly they require a great deal of water. When a supply is not convenient to the hive, it recommends to make a shallow trough, and put in a lot of gravel, sand, and the like, and renew the water daily, leaving the gravel and stones partly exposed, so that the bees can get at the water without fear of being drowned.

LEICESTERS VS. COTSWOLDS.—The owner of a large stock farm in Canada, who gives much attention to these two breeds of sheep, has nearly two hundred Leicesters, all descended from Bakewell's flock, and several of them imported directly from that celebrated breeder. According to a notice in the Genesee Farmer, his Leicester ewes generally produce two lambs each year; "he gives them the preference to the Cotswolds, and estimates that he can obtain as much mutton in two years from a certain number of Leicester ewes, as he can in three years from the same number of Cotswolds. He thinks they consume less grass than the common sheep, and finds an acre of good grass will keep ten of his sheep throughout the summer." His sheep are wintered on pea straw and turnips—of the latter he grows annually about ten acres, averaging 1,200 bushels per acre. B. [As Mr. Bakewell died in 1795, there is some reason to doubt whether there are sheep in Canada or elsewhere, "imported directly from that celebrated breeder."]

AMERICAN GLIMPSES OF AGRICULTURE IN GREAT BRITAIN. By LUTHER H. TUCKER of "The Country Gentleman," and Treasurer of the New-York State Agricultural Society. A pamphlet, 58 pages, 8 vo.

Mr. Tucker has furnished a very interesting account of his observations upon British Agriculture, made during a recent tour, to the Transactions of the N. Y. State Agricultural Society. His letters to the COUNTRY GENTLEMAN have embodied the same general matter, and here it is presented in a compact and convenient form for reading and reference. Few persons have ever written from observation upon the agriculture of any country, who have in so excellent a general view, given so many desirable details or so much of value, in equal compass.—Hartford Homestead.



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For further particulars and descriptions, see the recently published ILLUMINATED CATALOGUE of the ALBANY AGRICULTURAL

WORKS, WAREHOUSE AND SEED STORE, which is furnished gratis on application and receipt of three cents to prepay postage on same. Local Agents solicited where none are now appointed, to whom liberal discounts will be allowed. Address **EMERY BROTHERS,** Aug. 30—w&mt. Nos. 62 & 64 State-st. Albany, N. Y.



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Aug. 9—w&mt.

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EIGHTH NATIONAL EXHIBITION. AT CINCINNATI, OHIO, SEPT. 12th--20th.

The UNITED STATES AGRICULTURAL SOCIETY will hold its Eighth Annual Agricultural and Industrial Exhibition on the grounds liberally provided by the citizens of Cincinnati, which are to be fitted up in the best style. There will be Halls and Tents for the display of IMPLEMENTS, MACHINERY, TOOLS, DOMESTIC MANUFACTURES, FARM AND GARDEN PRODUCE, FRUITS, FLOWERS, and NATIVE WINES; with Stalls and Pens for HORSES, CATTLE, SHEEP, and SWINE; and an unequalled Track, one mile in length and forty feet in width, for the exhibition of Horses. The Premiums offered—in cash—gold, silver and bronze medals—diplomas and certificates, amount to

\$20,000.

The Exhibition will remain open from Wednesday, the 12th, to Thursday, the 20th, of September, thus giving time to examine and test the implements and machinery.

For premium list or information, apply at the Office of the Society, No. 356 Pa. avenue, (up stairs) Washington, D. C., or to the subscriber, at Cincinnati, Ohio.

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Aug. 2—w6t.

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Or any desired information relating to these machines, address

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May 24—weow6tm2t.

Schenectady, N. Y.

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Aug. 23—w6m2t.

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Aug. 23—wit.

THE ILLUSTRATED ANNUAL
REGISTER OF RURAL AFFAIRS.
1861.

THE SEVENTH NUMBER of this attractive and useful Work is now nearly ready for the Press. We hope to have it out some weeks earlier than usual, and are now prepared to receive orders for single numbers or in quantity, which will be filled as soon as the REGISTER for 1861 is issued. The attention of OFFICERS OF AGRICULTURAL SOCIETIES and others who propose attending Town, County or State Fairs this Fall is particularly requested to the ready Sale which may be had for the REGISTER during these anniversaries, and on other occasions, from the First of September even until another spring, TERMS—as heretofore: SINGLE COPIES, postpaid, TWENTY-FIVE CENTS; ONE DOZEN COPIES, postpaid, TWO DOLLARS; ONE HUNDRED COPIES, FIFTEEN DOLLARS, and larger quantities at a farther reduction.

TO ADVERTISERS!

TWENTY PAGES only will be devoted, as in the previous issues, for 1855, '56, '57, '58, '59, and '60, to ADVERTISEMENTS. The number being limited, more or less applications have each year arrived too late for admission upon them; last season several of our best friends and advertising customers were thus disappointed, and on this account, as well as in order that the work may be expedited as much as possible, it is desired that all who wish for space should send in their advertisements IMMEDIATELY. Notwithstanding increased circulation, prices remain for 1861 as heretofore:

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 2. Design for a Cottage of the Smallest Size.
 3. Design for a Cottage on a somewhat Larger Scale.
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- II. LAYING OUT GROUNDS—Five Engravings.
 1. Plan of a Village Half Acre Garden.
 2. Simple but Graceful Arrangement of Pleasure Grounds.
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THE PUBLISHERS, with the view of rendering the circulation of the ANNUAL REGISTER for 1861, still wider and larger than that of any previous Number, are prepared, as above intimated, to offer the most liberal Terms for its introduction in quantities, either to Agents, Agricultural Societies, Nurserymen, Dealers in Implements and Seeds, or any others who take an interest in the dissemination of useful reading, and in the promotion of Rural Improvement.

Address all orders or inquiries to the publishers,

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